9th ISCLO

INTERNATIONAL SEMINAR AND CONFERENCE
ON LEARNING ORGANIZATION

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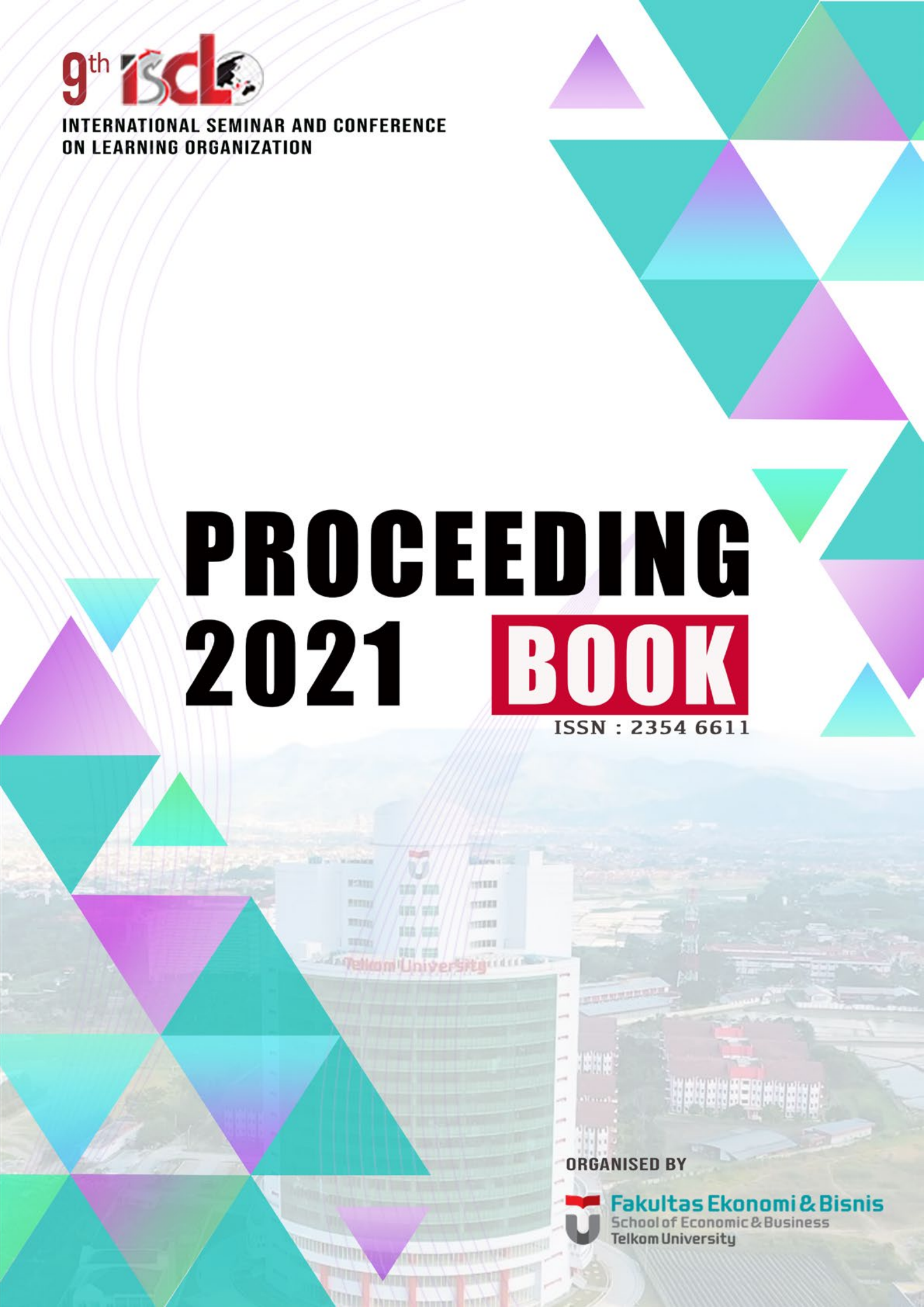

ORGANISED BY

Fakultas Ekonomi & Bisnis
School of Economic & Business
Telkom University

Proceeding of the
9th International Seminar and Conference on Learning Organisation
"New Strategies for Organization After New Normal"

By: International Seminar and Conference on Learning Organisation, Telkom University
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ISCLO Secretariat
School of Economic and Business
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The purpose of the ISCLO is to serve as one of the primary channels of knowledge sharing and the promotion of learning organisation. The conference encourages experts and scholars all over the world to share their research and best practice outcomes through presentations. An important goal of the conference is to promote learning from each other by exchanging ideas and views, and building networks.

The conference encourages submissions for paper presentations from academics and practitioners. In order to reach the goals of the sharing and exchange of experiences of both theoretical developments and applications, these presentations may have a focus on either research studies or case studies of best practices on related topics.

ISCLO 2021

“New Strategies for Organization After New Normal”

The Covid-19 pandemic that has lasted for 2 years has encouraged all sectors of the organization to have new strategies to deal with the new normal. Technological challenges, changes in new habits within organizations, jobs and organizations that must continue to evolve require adjustment during a pandemic. In addition, in order to survive, organizations need to continue to learn and have strategies to deal with changes in the new normal era. The transfer of knowledge about strategy during the new normal period will certainly have an impact on organizational performance and innovation in order to maintain the existence of the organization.

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PREFACE

Assalamu'alaykum Warahmatullahi Wabarakatuh.

All praises are to Allah, the Merciful, the All – Beneficent, by whose Grace and Blessings have enabled us to gather here for the 8th ISCLO (International Seminar and Conference on Learning Organisation) 2020.

I would like to express my gratitude to our honourable keynote speaker, Professor Alexandros Psychogios, distinguished panellists, Dr Marianne Afanassieva, Dr Muhammad Awaluddin, and Mr Yose Rizal for the opportunity they give to us to learn and to gain insights from their expertise and experiences. I would like to thank the respected authors who presented their works in 5 parallel session rooms provided. Huge appreciation is presented to the Rector of Telkom University, Professor Adiwijaya and all the vice rectors, Dean of Faculty of Economics and Business, Dr Ratri Wahyuningtyas and FEB management, and last but not least, all the 8th ISCLO 2021 committee, Reviewers, Session Chairs, Hosts, Co-Hosts, MC, and Moderator that can make this event happened. Massive thanks also presented to our great partner, STIE Ekuitas and Business Administration Department, Parahyangan Catholic University as well as our superb sponsors, Prodia and Yayasan Perisai Academia Peduli.

As a regular event, this year's ISCLO is the 8th event since 2013. This is the first ISCLO in history which is completely conducted on a digital platform in line with the physical distancing norms due to the COVID-19 pandemic. Fortunately, we can still receive 87 submissions with 53 of them are presented on the conference day after a careful blind review process. There are 16 titles from the Marketing track, 12 titles from the HRM track, 11 titles from Economics, Financial Management and Accounting track, 8 titles from the Entrepreneurship track, 3 titles from the Operation and IT Management track, and 3 titles from the Strategic management track. With the theme of learning organisation in the new normal era, we seek the research that capture, examine, and explore the organisational learning process of organisation impacted by the pandemic. Therefore, 10% of the registration fees is donated to the COVID-19 impacted parties.

On behalf of the committee, I hope you can have an insightful learning and wonderful experience from this ISCLO 2020. Thank you very much once again and please apologise if there are still some shortcomings.

Wassalamu'alaykum warahmatullahi wabarakatuh,

The 9th ISCLO Chair Women

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RUNDOWN OF ISCLO 2021 (ONLINE CONFERENCE)

Thursday, November 25th, 2021

Conference Schedule 1		
Time (GMT +7)	**Activities**	**Person in Charge**
08.30 - 09.00	Open Registration and Protocol Preparation	MC: Muhammad Azhari, SE, MBA Zoom Link: https://telkomuniversity-ac-id.zoom.us/j/96079342662
09.00 - 09.10	Greetings, Indonesia Raya & Mars Tel-U	MC: Muhammad Azhari, SE, MBA
09.10 - 09.20	Opening Remarks	Chair Woman: Willy Sri Yuliandhari, P.hd
09.20 - 09.30	Opening Speeches and Opening Ceremonial	Rector of Telkom University: Prof. Adiwijaya
09.30 - 09.35	Photo Session, Announce Moderator	MC: Muhammad Azhari, SE, MBA
09.35 - 09.40	Greetings, announce CV Keynote Speaker 1 and explain about the rundown for the session	MC: Muhammad Azhari, SE, MBA Moderator: Siska Noviaristanti, Ph. D
09.40 - 10.05	Keynote Speech 1	Prof. Dr. Siti Nabiha Abdul Khalid
10.05 - 10.30	Panel Discussion of Invited Speakers	Speaker 1: Dr. Riza Agung Nugraha Rukmana, S.T., M.M
10.30 - 10.55		Speaker 2: Mr. DP. Ariestya, S.T., M.T.
10.55 - 11.20		Speaker 3: Mr. Dodie Tricahyono, PhD
11.20 - 11.50	Panel Discussion (Q&A)	Moderator and Invited Speakers
11.50 - 12.00	Certificate of appreciation and photo session for speakers	Dean of School of Economy and Business, Telkom University: Dr. Ratri Wahyuningtyas
12.00 – 12.05	Closing	MC: Muhammad Azhari, SE, MBA
12.00 - 13.30	Lunch Break	-
Parallel Session Schedule		
13.30 - 13.40	Opening	Session Chairs: greetings, rules, photo session
13.40 - 13.50	Presentations of Parallel Session	Presenter 1
13.50 - 14.00		Presenter 2
14.00 - 14.10		Presenter 3
14.10 - 14.20		Presenter 4
14.20 - 14.30		Presenter 5
14.30 - 14.40		Presenter 6
14.40 - 14.50		Presenter 7
14.50 - 15.00		Presenter 8
15.10 – 15.15	Closing	Session Chairs
End of Parallel Session (Participants Join to The Seminar Room)		
Conference Schedule 2		
15.15 – 15.30	MC Open The Session	MC: Muhammad Azhari, SE, MBA Moderator: Siska Noviaristanti, Ph. D
15.30 – 15.55	Keynote Speech 2	Prof. Nuran Acur
15.55 – 16.15	Q&A	Moderator: Siska Noviaristanti, Ph. D

16.15 – 16.20	Certificate of appreciation and photo session for speakers	Dean of School of Economy and Business, Telkom University: Dr. Ratri Wahyuningtyas MC: Muhammad Azhari, SE, MBA
16.20 – 16.25	Best Presenter Announcement	Dean of School of Economy and Business, Telkom University: Dr. Ratri Wahyuningtyas MC: Muhammad Azhari, SE, MBA
16.25 – 16.30	Closing ISCLO	Dean of School of Economy and Business, Telkom University: Dr. Ratri Wahyuningtyas MC: Muhammad Azhari, SE, MBA Moderator: Siska Noviaristanti, Ph. D

General Terms and Conditions For The Conference

1. Kindly display your name as formatted below:
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   b. For other participants:

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2. Please use the ISCLO 2021 Virtual Background and kindly keep your camera on during the event.
3. Please manage your time when presenting your paper. Every presenter will be given 15 minutes, 10 minutes for presentation, and 5 minutes for Questions & Answers.
4. The session chair in every room will be the time keeper who will remind the presenters about the remaining time within the presentation.
5. The whole event in this conference (plenary and parallel sessions) will be recorded for the documentation. The plenary session will also be live streamed on SEB Telkom University's Youtube channel while the parallel sessions' recording will only be given to the presenter upon request.
6. Audiences' microphone will be muted during the presentation. The audience can deliver questions to presenters by typing the questions in the chat feature in Zoom.
7. Due to the limited time, the questions from participants and audiences will be selected and adapted by moderator to be answered by the presenter.
8. Participants and presenters can only join one room during the whole parallel session.
9. Participants and presenters should update their Zoom application to the latest version.
10. Certificate of attendance will be emailed to each participant after filling out the questionnaire after the event.

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2. The format of presentation file name is: Room_Author Name_Paper ID
   Example: 1_Ariana Grande_123.pptx
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PRESENTATION SCHEDULE - ROOM 1

Session Chair: Dr. Brady Rikumahu, S.E., M.B.A

Zoom Link: https://telkomuniversity-ac-id.zoom.us/j/95578462938

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ISCLO 2021 PARALLEL SESSION						
Room 1						
No.	**Start**	**End**	**Duration**	**Presenter Name**	**Paper Title**	**Paper ID**
	13.30	13.40	10	**Session Chair:** Dr. Brady Rikumahu, S.E., M.B.A		
1.	13:40	13:50	10	Irene Wei Kiong Ting, Qian Long Kweh, Cheng Zhang, Chunya Ren	Innovation index, intellectual capital, and firm performance: Evidence from Chinese companies	ISCLO-21-010
2.	13:50	14:00	10	Dedi Supiyadi	Profitability Analysis at PT Pegadaian (Persero) 2018-2020	ISCLO-21-042
3.	14:00	14:10	10	Listi Herlina	The Effect of Banks Specific Variables on Non-Performing Loan (NPL) For Period 2011-2020 (Case Study PT Bank Tabungan Negara Tbk)	ISCLO-21-028
4.	14:10	14:20	10	Putri Fariska Sugestie	Momentum Driven and Return On Sentiment Social Media Investor Analysis	ISCLO-21-021
5.	14:20	14:30	10	Cahyaningsih	Corporate Life Cycle: Executive Education and Social Activities	ISCLO-21-001
6.	14:30	14:40	10	Tri Utami Lestari	Firm Value: Institutional and Managerial Ownership	ISCLO-21-023
7.	14:40	14:50	10	DWI URIP WARDOYO	Factors Affecting The Performance Of Bpkp Auditors During The Covid-19 Pandemic	ISCLO-21-024
8.	14:50	15:00	10	Brady Rikumahu, Ajeng Anggraeni	Regime-switching regression for inferencing the effect of the Hang Seng, S&P500, and SET indices on the Jakarta Composite Index	ISCLO-21-022
9.	15:00	15:15	15	Closing Session Chair		

PRESENTATION SCHEDULE – ROOM 2

Session Chair: Dr. Astrie Krisnawati, S.Sos., M.Si.M

Zoom Link: https://telkomuniversity-ac-id.zoom.us/j/95360738603

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ISCLO 2021 PARALLEL SESSION						
Room 2						
No.	**Start**	**End**	**Duration**	**Presenter Name**	**Paper Title**	**Paper ID**
	13.30	13.40	10	**Session Chair:** Dr. Astrie Krisnawati, S.Sos., M.Si.M		
1.	13:40	13:50	10	Bill Andy Christian	The Effect of Stock Liquidity on the Capital Structure of Companies in Indonesia Period 2016-2020	ISCLO-21-048
2.	13:50	14:00	10	Olivia Patricia	The Effect of Independence, Competency, Objectivity, Work Experience, Professional Skepticism, and Locus of Control on Audit Quality in Central BPKP	ISCLO-21-008
3.	14:00	14:10	10	Anissa Nurbaiti	The Effect Of Competency, Independence And Ethics On Audit Quality (Case Study at BPKP of Papua Province Representative Office)	ISCLO-21-025
4.	14:10	14:20	10	Salza Adzri Arismutia	The Role Of Forensic Accountants In Fraud Disclosure In Indonesia	ISCLO-21-029
5.	14:20	14:30	10	Diah Febriyanti	Auditing during the COVID-19 Pandemic: The effect of social distancing on auditing quality	ISCLO-21-038
6.	14:30	14:40	10	Kasir	LITERATURE STUDY : Corporate Governance for Sustainability Reporting period 2016 – 2020	ISCLO-21-030
7.	14:40	14:50	10	Majidah Majidah	Risk Management in Indonesia Assurance Industry	ISCLO-21-012
8.	14:50	15:00	10	Dini Wahjoe Hapsari	Value Chain In The Intellectual Capital And Firm Performance	ISCLO-21-046
9.	15:00	15:15	15	Closing Session Chair		

PRESENTATION SCHEDULE – ROOM 3

Session Chair: Indira Rahmawati, Ph.D

Zoom Link: https://telkomuniversity-ac-id.zoom.us/j/92544750042

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ISCLO 2021 PARALLEL SESSION						
Room 3						
No.	**Start**	**End**	**Duration**	**Presenter Name**	**Paper Title**	**Paper ID**
	13.30	13.40	10	**Session Chair:** Indira Rahmawati, Ph.D		
1.	13:40	13:50	10	Dialah Hokosuja Hutabalian	Knowledge Management Development in Pharma Co.	ISCLO-21-013
2.	13:50	14:00	10	Santi Damayanti	Policy Analysis to Improve the Micro Financing of Kredit Usaha Rakyat (KUR) in PT Bank Jabar Banten, Tbk Using System Dynamic Models	ISCLO-21-040
3.	14:00	14:10	10	Siti Sarah	Purchasing Decision On Sustainable Muslim Fashion at SME Gallery Maliqa in Terms Of Brand Image, Brand Awareness, Price, Celebrity Endorsements	ISCLO-21-041
4.	14:10	14:20	10	Faridah Maarof	Conflict Management And Job Performance In Banking Industry	ISCLO-21-018
5.	14:20	14:30	10	Maria Jade Opulencia	Job Climate and Employee Satisfaction during Pandemic: An Empirical Study from an Emerging Economy	ISCLO-21-019
6.	14:30	14:40	10	David Pereira	Rethinking Balanced Scorecard for Higher-Education: Cave-In the Strategic Objectives under Strategic Focus Areas of the Core Business	ISCLO-21-002
7.	14:40	14:50	10	Kevin Sevag Kertechian	Parallel Mediation Model of Distributive and Procedural Justice on the Relationship Between Commitment and Performance during COVID-19 Pandemic	ISCLO-21-009
8.	14:50	15:05	15	Closing Session Chair		

PRESENTATION SCHEDULE – ROOM 4

Session Chair: Jurry Hatammimi, Ph.D

Zoom Link: https://telkomuniversity-ac-id.zoom.us/j/98158874150

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ISCLO 2021 PARALLEL SESSION						
Room 4						
No.	**Start**	**End**	**Duration**	**Presenter Name**	**Paper Title**	**Paper ID**
	13.30	13.40	10	**Session Chair:** Jurry Hatammimi, Ph.D		
1.	13:40	13:50	10	Jiani Syasa Ramdini	Improving The Quality of Online Course Services Using Sentiment Analysis and Topic Modelling	ISCLO-21-020
2.	13:50	14:00	10	Riyandi	Empowering SMeS In Indonesia Through The Role Of Microfinance Institutions And Entrepreneurial Competencies	ISCLO-21-031
3.	14:00	14:10	10	Detya Wiryany	Batik Marketing Communication Among Millennials (Descriptive Study Of Marketing Communication Of Batik Trusmi Cirebon Among Millennials During The Pandemic)	ISCLO-21-032
4.	14:10	14:20	10	Ezra Karamang	The Effect Of Corporate Reputation And Customer Trust On The Purchase Interest Of Prospective Postgraduate Students At Xyz University	ISCLO-21-033
5.	14:20	14:30	10	Dadan Abdul Aziz Mubarok	Consumer Purchase Decision Analysis in Pandemic Era (study on hand sanitizer product)	ISCLO-21-037
6.	14:30	14:40	10	Tarandhika Tantra	A Study On Consumer Preference Towards Braga Art Café Bandung	ISCLO-21-047
7.	14:40	14:50	10	Sunu Puguh Hayu Triono	Model of Business Analytics Capability: How It Affects Firm Performance	ISCLO-21-044
8.	14:50	15:05	15	Closing Session Chair		

PRESENTATION SCHEDULE – ROOM 5

Session Chair: Arien Arianti Gunawan, B.A., M.S.M., M.Phil.

Zoom Link: https://telkomuniversity-ac-id.zoom.us/j/91237835401

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ISCLO 2021 PARALLEL SESSION						
Room 5						
No.	**Start**	**End**	**Duration**	**Presenter Name**	**Paper Title**	**Paper ID**
	13.30	13.40	10	**Session Chair:** Arien Arianti Gunawan, B.A., M.S.M., M.Phil.		
1.	13:40	13:50	10	Kartika Nuradina	Organizational Climate of Bandung City Regional Secretariat Employees	ISCLO-21-034
2.	13:50	14:00	10	Rama Chandra Jaya	Increased User Engagement and Purchase Intention with Human-Centric Brand and Gamification on E-commerce Websites and Mobile Applications	ISCLO-21-035
3.	14:00	14:10	10	Ridwan Ridwan	The Influence Of Human Resources Quality On Financial Statements Of National Amil Zakat Agency Of Cianjur District	ISCLO-21-036
4.	14:10	14:20	10	Ferry Kosadi	Online Learning Readiness, Accounting Automation and Learning Process	ISCLO-21-039
5.	14:20	14:30	10	Lina Fatimah Lishobrina	Analisis Implementasi Digital Transformation Strategy Pada Bank Rakyat Indonesia (Studi Kasus Bank Rakyat Indonesia Kantor Wilayah Denpasar)	ISCLO-21-006
6.	14:30	14:40	10	Subhan Riyandi	Analysis Of The Success Of Information System Implementation Warehouse Management System (Wms) - Selog With Delone & Mclean Approach	ISCLO-21-007
7.	14:40	14:50	10	Mochamad Alief Adji Prasetyo	The Impact Of Digital Capabilities On Sustainable Digital Transformation Of Hospitality Industry In West Java	ISCLO-21-011
8.	14:50	15:00	10	Fetty Poerwita Sary	How Online Training Affects Entrepreneurial Motivation on MSMEs in Super Priority Destination of Yogyakarta and Bali)	ISCLO-21-015
9.	15:00	15:15	15	Closing Session Chair		

PRESENTATION SCHEDULE – ROOM 6

Session Chair: Dr. Maria Apsari Sugiat, S.E., M.M

Zoom Link: https://telkomuniversity-ac-id.zoom.us/j/93637470329

All presenters who belong to this room, please join Whatsapp Group Chat:

https://chat.whatsapp.com/KGyU8eogYKa704oB8U6dDE

ISCLO 2021 PARALLEL SESSION						
Room 6						
No.	**Start**	**End**	**Duration**	**Presenter Name**	**Paper Title**	**Paper ID**
	13.30	13.40	10	**Session Chair:** Dr. Maria Apsari Sugiat, S.E., M.M		
1.	13:40	13:50	10	Dhian Wahyuni	A Comparison Of Financing For Small, Medium-Sized (Smes) And Large Family Firms: A Scientific Literature Review	ISCLO-21-027
2.	13:50	14:00	10	Puspita Wulansari	Job Satisfaction As A Mediator Between Compensation And Motivation On Driver Online Performance	ISCLO-21-004
3.	14:00	14:10	10	Puspita Wulansari	Innovation Culture As A Mediator Between Human Capital Supply Chain And Firm Performance	ISCLO-21-005
4.	14:10	14:20	10	Gadang Ramantoko	Extracting The Dimensions Of Blockchain-For-Food Using Semantic Network Of Keywords	ISCLO-21-026
5.	14:20	14:30	10	Aldilla Iradianty	Factors Affecting Bank Profitability Of Commercial Foreign Banks In Indonesia	ISCLO-21-003
6.	14:30	14:40	10	Sri Rahayu	Budget Realization Statement Impact Of Covid 19 Activities	ISCLO-21-043
7.	14:40	14:50	10	Koenta Adji Koerniawan	The Quality Audit Of Local Accounting Firm In Indonesia	ISCLO-21-045
8.	14:50	15:05	15	Closing Session Chair		

Factors Affecting Bank Profitability Of Commercial Foreign Banks In Indonesia

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Abstract
Commercial Foreign Banks in Indonesia are banks domiciled in Indonesia and whose ownership is controlled by foreign banks, foreign banks in Indonesia including Bank of America, N.A. from the United States, Bangkok Bank Plc. from Thailand, Citibank N.A. from the United States, The Hongkong & Shanghai B.C, LTD from Hong Kong and Shanghai, Bank of China Limited, JP. Morgan Chase Bank, NA, Bank Tokyo-Mitsubishi UFJ LTD, Standard Chartered Bank. Of course, the purpose of Commercial Foreign Banking is to make a profit, therefore this study aims to determine what factors affect the profitability of Commercial Foreign Banks in Indonesia during the 2016-2020 period, the research method used by the author in this study is descriptive and verification using T-test, where the independent variables in this study are Capital Adequacy Ratio (CAR), Net Performing Loan (NPL), Operating Expense of Operating Income (OEOI), Net Interest Margin (NIM), and Loan Deposit Ratio (LDR), while The dependent variable in this study is Bank Profitability as measured by Return On Assets (ROA). The results show that the factors that affect the profitability of Foreign Commercial Banks in Indonesia during the 2016-2020 period are LDR, CAR, NPL and NIM. For foreign banks that pay attention to asset quality management through the settlement of non- performing loans, so that banks are able to suppress bad loans, because credit is the main factor in the poor performance of banks. In addition, banks can also expand the market, by increasing credit to obtain higher interest income. As well as increasing net interest income and streamlining productive assets owned by balancing them with net income.
Keywords: ROA, NPL, OEOI, NIM, Commercial Foreign Bank

Introduction

Commercial Foreign Banks in Indonesia carry out the intermediation function, namely receiving funds from customers who have excess funds in the form of deposits and channeling these funds back to other customers in the form of loans, always paying attention to the proportion of funds received and distribution of funds that are balanced and in accordance with predetermined standards by Bank Indonesia (Iradianty, Arista, & Pramesti, 2021), So, what Commercial Foreign Banks do to generate profits is to carry out the intermediation process, and of course, Commercial Foreign Banks in Indonesia are regulated by Bank Indonesia and supervised by The Financial Services Authority (OJK) in order to protect the interests of consumers and the public, and to bring about the financial services industry into becoming more profitable (OJK, 2021). Commercial Foreign Banks are one type of bank in Indonesia that is classified based on ownership; there are also Commercial National Banks, state-owned banks, and locally owned government banks (Ismail I., 2021). This research will focus on Commercial Foreign Banks in Indonesia because the number is growing due to the acquisition of long-standing National Banks in the country.

Basically all of these banks carry out the same process, namely collecting funds from customers and channeling them back to customers, and obtaining profits from the results of their activities; This is a profitable process because the number of banks in Indonesia has reached 96. according to Nisaputra (2020) Indonesia is one of the countries with the largest number of banks with a market share of 77.22% plays an important role in the Indonesian financial system and is one of the largest financial assets in the economy (Ruslan, Pahlevi, Alam, & Nohong, 2019). Following the global financial crisis, Indonesia's economic growth rate surpassed 6%, reaching 6.5% in 2011. Following that, Indonesia's economic growth slowed further; in 2015, economic growth was only 4.79 percent, the lowest level since 2009. (Chandra and Carolin, 2018) As a result, this research will run from 2016 to 2020, during which time a large amount of foreign capital will flow into the country as a result of the acquisition process carried out by Commercial Foreign Banks against National Banks.

Commercial Foreign Banks differ from other Banks in that they are established in the form of bank branches that already exist abroad or as a combination of Foreign Banks and National Banks in

Indonesia (OJK, 2021). The presence of Commercial Foreign Banks in Indonesia has several advantages for the national economic system, one of which is the entry of capital from abroad into the country. However, there are also challenges faced as a result of the presence of Commercial Foreign Banks in Indonesia, which are strong competitors in the Indonesian Banking industry, In obtaining profitability, commercial Banks are especially strong competitors when compared to National Banks (Chabachib, Yudha, & Udin, 2020); in fact, profitability is not only a challenge in competition, but also a problem that the Banking industry must face (Chandra and Carolin, 2018) in order to achieve sound financial condition and provide a profit for its parent Bank overseas. This Profitability Ratio is an important issue for Commercial Foreign Banks, and more research is needed to determine what factors influence it so that Commercial Foreign Banks in Indonesia can benefit their main banks abroad.

Commercial Foreign Banks in Indonesia are separate from their parent Banks abroad, are independent legal entities, and provide full Banking services. Commercial Foreign Banks in Indonesia are responsible for their obligations because the main company owns and controls those (Waliyunisa and Imaniyati, 2020). Commercial Foreign Banks in Indonesia are owned by holding companies from various countries; there are currently ten Commercial Foreign Banks in Indonesia, three of which are from the United States, along with the names Commercial Foreign Banks in Indonesia and the country of origin, America, N.A from the United States, The Royal Bank Of Scotland N.V from Scotland, Bangkok Bank Pcl from Thailand, Citibank N.A from the United States, The Hongkong & Shanghai B.C, LTD from Hong Kong and Shanghai, Bank Of China Limited from China, Deutsche Bank AG from Germany, J.P. Morgan Chase Bank from the United States, The Bank Of Tokyo-Mitsubishi UFJ LTD from Japan, and S (OJK, 2021).

Commercial Foreign Banks in Indonesia operate under policies and laws dictated by their overseas headquarters. Furthermore, National Banks in Indonesia are legally regulated limited liability companies. Commercial Foreign Banks entry into Indonesia generates capital flows for the national economy. Due to the presence of Commercial Foreign Banks in Indonesia, competition between Commercial Foreign Banks and National Banks will result in the production of a variety of products that will affect profitability income (Yudha, Chabachib, & Pangestuti, 2017). The satisfaction of customers who reuse Commercial Foreign Banks' services and products influences the quality of service and products produced by Commercial Foreign Banks. Commercial Foreign Banks to customers, and provides many benefits in every transaction activity, so that customers who use Commercial Foreign Banks' services and products can be used as input for management at the head office (Arafah, 2017).

Commercial Foreign Banks operate in a different process than other Banks, including (1) in the collection of funds. Unlike other Banks, Commercial Foreign Banks offer savings products in the form of demand deposits and time deposits. Commercial Foreign Banks are prohibited from accepting savings deposits; (2) if the distribution of credit funds is more directed to specific fields, such as international trade, industry, and production, foreign investment, and credit that cannot be fulfilled by national private Banks; (3) Other Bank services, such as transfer services, collection services, clearing services, foreign exchange, Bank card services, Bank draft services, safe deposit box services, opening and payments, Bank guarantee services, Bank notes services, and Travelers Check buying and selling services, can also be provided by Commercial Foreign Banks (Faudi, 2020). Commercial Foreign Banks activities, which differ slightly from those of National Banks, are not an impediment because the presence of Commercial Foreign Banks in a country increases the profitability of National Banks and even other national industries (Syamni, Rasyimah, Ratnasari, & Majid, 2018).

This strong condition of Commercial Foreign Banks resulted in several changes in National Banks, including the acquisition of National Banks by Commercial Foreign Banks and additional capital from Commercial Foreign Banks to National Banks. Up until 2020, Commercial Foreign Banks officially acquired as many as six National Banks. The six National Banks are: (1) Bank Bukopin, which was acquired by KB Kookmin Bank from Korea with a 67%, (2) Bank Permata, which was acquired by Bangkok Bank Public Company Limited with an 89.12%, and (3) Bank Agris, which was acquired by Industrial Bank of Korea from South Korea with a 95.79%, then (4) Bank Dinar Indonesia, which was acquired by a South Korean finance company, APRO Financial Co. Ltd., for 77.38%, merged with Bank Oke Indonesia, which was also controlled by APRO Financial at the time, then (5) Bank Danamon, which was gradually acquired by The Bank of Tokyo-Mitsubishi UFJ, Ltd. at 92.47%

beginning in 2017 and then merging with Bank Nusantara Parahyangan, which is also owned by The Bank of Tokyo-Mitsubishi UFJ, Ltd. Furthermore, Bank BTPN, which had been gradually acquired by Sumitomo Mitsui Banking Corporation of Japan up to 92.43%, demerged with Bank Sumitomo Mitsui Indonesia (Ningsih, 2020).

Commercial Foreign Banks have the same goals as businesses in general, which is to maximize shareholder profits. Profitability ratios are one of the important goals that companies must achieve when carrying out operational and investment activities, and Commercial Foreign Banks must pay attention to them (Syamni, Rasyimah, Ratnasari, & Majid, 2018). The profitability ratio is a ratio that attempts to determine a company's ability to generate profits within a specific time frame (Septiana, 2019), the profitability ratio describes how Commercial Foreign Banks carry out their activities to earn profits in order to provide positive values for stakeholders (Hidayat, 2018). The higher the profitability ratio, the better the performance of Commercial Foreign Banks, the greater the prosperity of banks, and the soundness of banks. Commercial Foreign Banks are said to be healthy if the profitability ratio value is between 1.25% and 1.5%, and Commercial Foreign Banks are very healthy if the profitability ratio value is greater than 1.5% (OJK, 2021). The profitability ratio obtained by Commercial Foreign Banks from 2016 to 2020 is always greater than 1.5%, indicating that Commercial Foreign Banks are classified as very healthy.

The profitability ratio is most accurately measured using Return on Assets (ROA) (Derbali, 2021), because ROA is measured by assets whose funds are primarily derived from public savings funds, and thus ROA is more representative in measuring the level of profitability (Dendawijaya, 2009). Good Bank activities cover many things (Pahlevi, Alam, & Nohong, 2019), so this research will look at what factors affect the ROA of Commercial Foreign Banks in Indonesia from 2016 to 2020. One factor influencing Commercial Foreign Banks high ROA value of 3.27% in 2020 is an increase in lending and a decrease in non-performing loans, as proxied by the high Capital Adequacy Ratio (CAR) of 54.61% in 2020. (OJK, 2021). This high CAR is considered very healthy because it is greater than the average limit of 12%. Although there are always CAR fluctuations in Commercial Foreign Banks, they are always categorized as very healthy, and Commercial Foreign Banks always strive to reduce non- performing loans and increase capital. Because capital is Commercial Foreign Banks' ability to bear losses from their activities and fund their operational activities, the greater the capital provided, the better Commercial Foreign Banks are able to finance their operational activities and provide a sufficient contribution to gain profitability (Harahap, 2018).

Capital Adequacy Ratio (CAR) is a factor that has an impact on profitability. (Pratama, Mubaroh, and Afriansyah, 2021; Harahap, 2018; Yusuf and Surjaatmadja, 2018; Chandra, 2016; Nur'aini, 2020) As a result, from 2016 to 2020, this research will investigate whether CAR has an impact on profitability at Commercial Foreign Banks in Indonesia. Aside from CAR, another factor influencing profitability is NPL (Pradina & Saryadi, 2019; Chabachib, Yudha, & Udin, 2020; Chabachib & Pangestuti, 2017; Chandra, 2016) NPL conditions in Indonesia differ from those in most other developed countries, where other countries experienced an increase in NPL and a decrease in capital (Hakim and Sugianto, 2018). The increase in NPL was due to decreased lending due to a lack of credit demand from its customers, as well as an increase in unapproved credit facilities. The NPL ratio, which is a declining credit to deposit ratio, reduced Commercial Foreign Banks exposure to exchange rate risk, which had a significant impact on profitability. The highest NPL ratio of Commercial Foreign Banks in Indonesia fluctuated, with the highest being in 2016 at 4.57%. This value was still classified as healthy, and the NPL of Commercial Foreign Banks in Indonesia always had healthy criteria from 2016 to 2020 because there was a lot of foreign capital entering Commercial Foreign Banks in Indonesia during that time.

Operating Expense of Operating Income (OEOI) is a ratio used to measure the level of efficiency and ability of a Bank in carrying out its operations, as well as a comparison of OEOI income in the previous 12 months in the same period (Loen, Ericson, & Listyandari, 2008). The highest OEOI value in the last five years was at 93.53%, namely in 2020, and the value of Commercial Foreign Banks OEOI was classified as very healthy even though the value was close to its category limit of 94% due to the smaller operating costs to operating income, the performance of Commercial Foreign Banks is getting better and the value of OEOI affects profitability (Pratama, Mubaroh, & Afriansyah, 2021; Yusuf & Surjaatmadja, 2018; Chandra, 2016; Dermawan & Desiana, 2019; Wibaselppa, 2018; Pradina & Saryadi, 2019). Another factor that influences profitability is the Net Interest Margin (NIM). The

NIM value of Commercial Foreign Banks has fluctuated greatly over the last five years, with the highest being at 4.09% in 2019 and the lowest being at 2.83% in 2020, even though the NIM value was below 3%, this value is still considered healthy.

The higher the NIM value, the healthier the financial condition of Commercial Foreign Banks (Iradianty, Arista, & Pramesti, 2021), but this does not always imply positive; high margins can lead to low efficiency levels (Azeez & Gamage, 2013). The increase in NIM value is usually triggered by a decrease in loan interest rates, which increases interest in taking credit and reduces the risk of customers failing to pay, and the income from this interest will increase the NIM value; the higher the NIM value, the higher the increase in profitability. Incentives are also provided by the government in the form of reduced core capital allocation for Commercial Foreign Banks that meet the NIM value of more than 4.5%. The fluctuating NIM value is also influenced by the slowdown in Indonesia's economic growth (Dewi & Triaryati, 2017), so the government strongly encourages Commercial Foreign Banks to increase the NIM value efficiently in order to profit in these uncertain conditions. Because NIM is included in the collection of Commercial Foreign Banks ability to generate profits, it has an impact on profitability (Pratama, Mubaroh, & Afriansyah, 2021; Chabachib, Yudha, & Udin, 2020; Chabachib & Pangestuti, 2017; Chandra, 2016; Dermawan & Desiana, 2019; Fanny, et al., 2020).

Another factor influencing profitability is the Loan to Deposit Ratio (LDR), which is included in the liquidity ratio, which is a ratio that describes Commercial Foreign Banks ability to meet short-term obligations (Hidayat, 2018) and is the ability of Commercial Foreign Banks to meet financial obligations that has due date. As we know, Commercial Foreign Banks activities involve channeling funds to customers in the form of credit; therefore, increasing the number of credit funds disbursed has the potential to increase Bank profitability (Kasmir, 2013). If you look at the LDR value from five years ago, the LDR value is at its lowest point in 2020, which is 95.91 percent, which means that the LDR value of Commercial Foreign Banks has always been in a state of disrepair in the last five years. Commercial Foreign Banks distribute credit effectively and strive to develop modern resources through money market loans in a very healthy financial management environment (Fanny, et al., 2020). As a result, this LDR has an impact on the profitability of Commercial Foreign Banks (Pratama, Mubaroh, & Afriansyah, 2021; Chabachib, Yudha, & Udin, 2020; Chabachib & Pangestuti, 2017; Chandra, 2016 ;Chandra & Carolin, 2018)

Commercial Foreign Banks in Indonesia should also try different strategies, such as providing more options to their customers, their head offices abroad, and the Indonesian government, based on what we can see as external parties in their published financial reports and financial performance, and as input for other parties. To find out what factors can affect the profitability of Commercial Foreign Banks, this research will look at both internal foreign commercial banks and external parties such as other researchers, potential investors, and so on: Does LDR, CAR, NPL, OEOI, and NIM have an impact on the Probability of Foreign Commercial Banks in Indonesia for the 2016-2020 period?

Literatur Review

According to Banking Law Number 10 of 1998, a Bank is a business entity that collects funds from the public in the form of savings and distributes them to the public in the form of credit and/or other forms to improve people's living standards. Another definition of a Bank is a financial intermediary institution that is generally established with the authority to accept deposits, borrow money, and issue promissory notes, also known as banknotes (Zain and Akbar, 2020). Commercial Foreign Banks have the same definition as previously stated; the difference is that this type of Bank is established in the form of Bank branches that already exist abroad or in the form of a mixture of Commercial Foreign Banks and National Banks in Indonesia (Muchar, Rahmidani, & Siwi, 2016), both owned by foreign private companies or foreign governments, so that profits and losses are shared (Ismail, 2010). Foreign parties who want to conduct business activities in the Banking sector can only do so through three ways, namely the opening of branch offices, the establishment of new Banks and buying shares of Banks that have been established, directly or through the stock exchange, with the condition: (1) Banks that have a rating and reputation the good one; (2) The total assets owned by a Foreign Bank wishing to open a branch office must be included in the world's top two hundred; (3) Must place business funds in rupiah or foreign currency at least Three Trillion Rupiah.

The provisions of The Financial Services Authority (OJK, 2021) for opening a representative

office of a Comercial Foreign Bank can be carried out if the Bank opening a Representative Office has total assets that are among the top 300 in the world. Representative Offices are only permitted to carry out the following activities: (1) providing information to third parties about the requirements and procedures for establishing relations with the head office/branch offices overseas; (2) assisting the head office or its overseas branch offices in supervising credit collateral located in Indonesia; (3) Providing foreign parties with information regarding trade, the economy, and Indonesia's finances, or vice versa; (4) Assisting Indonesian exporters in gaining market access abroad through international networks owned by representative offices, or vice versa. The Financial Services Authority enforces provisions to protect National Banks from being outmatched by Commercial Foreign Banks, because Commercial Foreign Banks, despite their small number, play an important role in stimulating and shaping the global economy, and are thought to outperform National Banks in developing countries (Nguyen, 2021). Wherever Commercial Foreign Banks are located, they continue to meet the requirements set by that country's government and always pay attention to key consumer financial decisions: (1) savings rate, (2) credit use, and (3) spending patterns (Battisti, Graziano, Leonidou, Stylianou, & Pereira, 2021).

The first factor that will be tested to determine whether or not it has an effect on profitability is CAR, which is classified as a solvency ratio and is used to measure a Bank's ability to find sources of funds to finance its activities (Septiana, 2019). Another definition of the solvency ratio, also known as the leverage ratio, is the ratio used to determine the extent to which a company's assets are financed by debt. That is, how much debt the company carries in comparison to its assets. In general, the solvency ratio is used to assess a company's ability to pay all of its obligations, both long and short term, if the company is dissolved (liquidated) (Kasmir, 2013). The solvency ratio, which is calculated using CAR, is the ratio of capital adequacy to allowance for write-offs to bear credit, the risk that occurs due to failure to collect interest. The higher the CAR value, the better Banks are able to deal with potential losses. Furthermore, NPL capital adequacy is an important factor for Banks to consider in order to grow their business while mitigating risk. The Financial Services Authority establishes the minimum capital adequacy (CAR) that each Bank must maintain as a percentage of total Risk Weighted Assets (RWA), which is 8%. CAR demonstrates capital's ability to cover potential loan losses and losses on securities investments.

The second factor that will be tested to see if it has an effect on profitability is NPL. NPL is one of the measurements of Bank business risk that shows the magnitude of the risk of non-performing loans in a Bank. Non-performing loans are caused by nonpayment of loan principal and interest, which can have a direct impact on bank performance and cause Banks to be inefficient (Herman, 2011). NPL is a condition in which the debtor is unable to pay his obligations to the Bank, specifically the obligation to pay the installments promised at the outset (Ismail, 2010). This NPL is a credit in which there are obstacles caused by two factors: the Banking side in analyzing the credit and the customer who, intentionally or unintentionally, fails to make payments on his obligations (Kasmir, 2013). As a result, it can be concluded that the Bank risk indicates the amount of credit risk caused by the debtor's inability to pay the loan principal and interest to the Bank, resulting in a decrease in bank performance. The closer Commercial Foreign Banks are to the 0% NPL value, the healthier they are (Iradianty, Arista, & Pramesti, 2021). This falling NPL value suggests that Commercial Foreign Banks have more regulatory capital and liquidity experience (Ozili, 2019)

The third factor that will be tested to see whether it has an effect on profitability is OEOI, namely the comparison of total operating costs with total operating income according to Bank Indonesia regulations. The Bank performs operational efficiency to determine whether the Bank's operations related to the Bank's main business have been carried out correctly, in accordance with the expectations of management and shareholders, and are used to show whether the Bank has used all its production factors effectively. As a result, the operational efficiency of the Bank's OEOI will have an impact on the Bank's performance. The OEOI ratio is used to assess the efficiency and ability of the Bank in carrying out its operations (Veitthzal, 2013). Because this ratio includes costs and interest income in its calculation, the value of the income statement is dominated by this ratio (Arif, 2020). Furthermore, OEOI is a ratio used to assess the efficiency and ability of the Bank in carrying out its operations, as well as to compare operational costs over a 5 year period. The previous month for operating income in the same period (Loen, Ericson, & Listyandari, 2008). The fourth factor that will be tested to see if it has an effect on profitability is NIM, the large margin of Commercial Foreign Banks requires to minimize its market share (Sarpong- Kumankoma, Abor, Aboagye, & Amidu, 2020),

so the government intervenes in Commercial Foreign Banks ownership and activities; whether or not this has an effect on the probability, we will see. NIM is the ratio of net interest income to average earning assets. This ratio reflects the Bank's ability to generate net interest income through the placement of earning assets. The higher this ratio, the better the Bank's performance in terms of interest income generation. It must be ensured, however, that this is not due to high intermediation costs; the assumption is that interest income must be reinvested to strengthen Bank capital. Furthermore, a comparison of Bank interest income minus Bank interest costs divided by average earning assets. Net interest income is calculated by subtracting interest income from interest expense. The higher this ratio, the higher the interest income on productive assets managed by the Bank, reducing the likelihood of the Bank going bankrupt (Taswan, 2010).

The fifth factor that will be tested to see if it has an effect on profitability is LDR. LDR, also known as the liquidity ratio, is a ratio that describes a Bank's ability to meet short-term obligations (Hidayat, 2018). Furthermore, the liquidity ratio measures a Bank's ability to meet matured financial obligations. Liquidity, in particular, reflects the availability of funds owned by Banks to meet all maturing debts. LDR is a ratio that compares the amount of credit granted to the amount of public funds and own capital used. Each factor provides a probability that is more informative than the estimate's timeliness (Cruz-Garcia, Forte, & Peiro-Palomino, 2020).

Methodology

To develop general principles, researchers use quantitative methods, which are activities of collecting, processing, analyzing, and presenting data based on the amount or number that are carried out objectively to solve a problem or test a hypothesis. The descriptive method was used in this research, with verification using the T-test. Descriptive research is a standard and systematic effort to provide answers to a problem or obtain more in-depth and broader information on a phenomenon with research stages and a quantitative approach (Yusuf M., 2014). Verification is the examination of the veracity of reports, statements, money calculations, and so on (Indonesia) for the 2016-2020 period, the population in this research is Commercial Foreign Banks in Indonesia. This research's total population consisted of ten Commercial Foreign Banks. Non-probability sampling was used to collect the sample. Non- probability sampling is not random and subjective, as each member does not have an equal chance of being included in the sample. Purposive sampling was used in this research to sample data sources with specific considerations. As a result, the following sample criteria are used in this research: (1) Commercial Foreign Banks in Indonesia from 2016 to 2020; (2) Commercial Foreign Banks that publish financial reports for the fiscal from 2016 to 2020.

Result

Table 1. Descriptive Statistics Result

Variable	Description	Min	Max	Mean	Std.Dev
LDR (%)	(Total Credit/Third Party Funds) x 100%	25.35	996.74	148.54	160.56
CAR (%)	(Capital /ATMR) x 100%	16.59	87.75	42.80	22.01
NPL (%)	(Non-performing Credit/Total credit) x 100%	.12	9.97	2.35	2.28
OEOI (%)	(Operating Expenses/Operational income) x 100%	37.33	99.53	77.56	19.91
NIM (%)	(Net Interest Income/Average Earning Assets) x 100%	1.33	6.40	3.91	1.24
ROA (%)	(Net Income / Total Assets) x 100%	.32	4.70	2.22	1.14

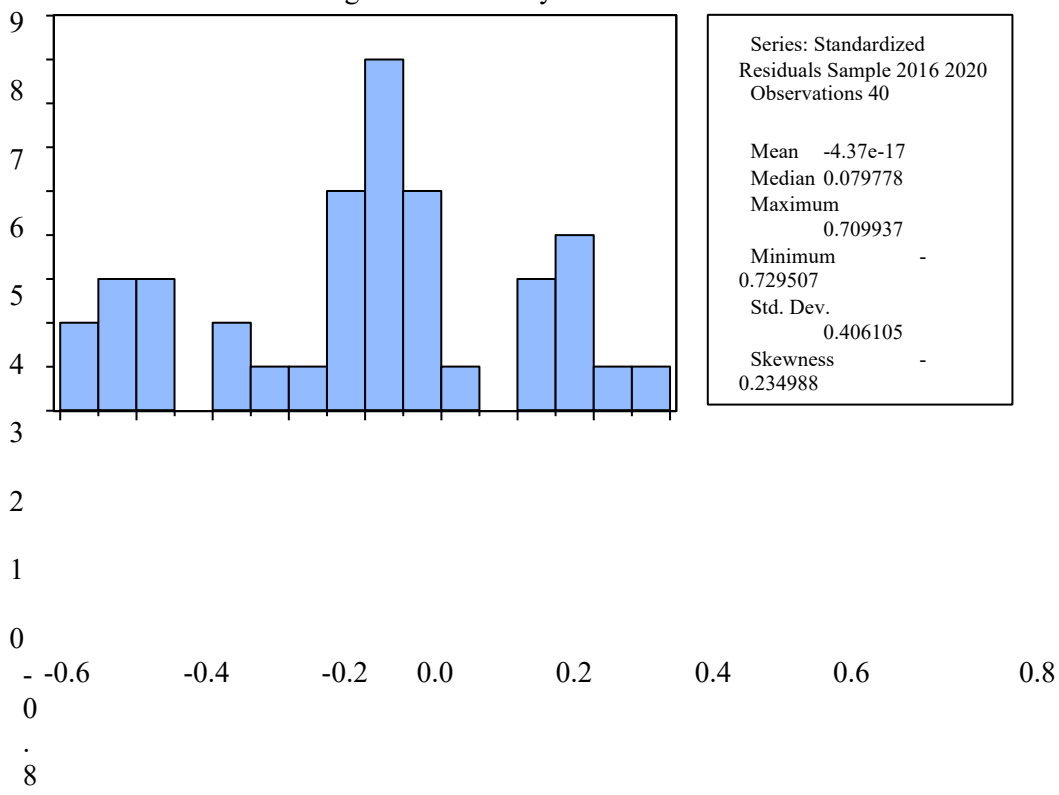
Source: Data processed, 2021

In 2020, JP Morgan has the lowest LDR Value of 25.35%. Bangkok Bank has 996.74% of the total value in 2020. The average LDR is 148.54%. The average LDR must be greater than 120% so that the Bank is classified as unhealthy. This means that the average LDR of Foreign Commercial Banks in Indonesia from 2016 to 2020 is considered unhealthy. St dev LDR of 160.56% means if there is an average deviation of not greater than 160.56% or less than - 160.56%. In 2016, Standard Chartered Bank had the lowest CAR value of 16.59%. In 2020, Bank Of Tokyo-Mitsubishi UFJ LTD had the highest CAR value of 87.75% of the company. The average CAR is 42.80% with very healthy criteria

because the average CAR must be greater than 12% to be said to be very healthy. The st dev CAR of 22.01% indicates that if there is a deviation the average is not greater than 22.01% or -22.01%. In 2017, Bank of China had the lowest NPL level of 0.12% and Bangkok Bank had the highest NPL value of 9.97% of the company's shares in 2020. With banking NPL criteria in the healthy category, the average NPL is 2.35%. Because the average NPL must be between 2% to 5% for the limit to be considered healthy. The st dev of 2.28% indicates that if there is a deviation the average is not greater than 2.28% or -2.28%. In 2016, Bank of China had the lowest BOPO value of 37.33% and in 2017, Standard Chartered Bank had the highest OEOI value of 99.53% of the company's shares. The average OEOI is 77.56% with the criteria for OEOI Banking in the very healthy category because very healthy conditions are less than 94%. This means that the average OEOI of Commercial Foreign Banks in Indonesia from 2016 to 2020 is considered very healthy. The st dev OEOI of 19.91% indicates that if there is a deviation the average is not greater than 19.91% or -19,91%.

Bank of China has the lowest NIM value of 1.33% in 2020, Citibank has the highest NIM ownership (6.40%) in 2017. The average NIM is 3.91% with the criteria of NIM banking in the very healthy category because of the limit said to be very healthy is the average NIM is greater than 3%. This means that the average NIM of Foreign Commercial Banks in Indonesia from 2016 to 2020 is considered very healthy. The st dev of 1.24% indicates that if there is a deviation the average is not greater than 1.24% or -1.24%. In 2017, Standard Chartered Bank had the lowest ROA value of 0.32% and Citibank controlled 4.70% of the market in 2019. The average ROA was 2.22%, with Banking ROA criteria in the very healthy category, namely average ROA must be greater than 1.5%. This means that the average ROA of Foreign Commercial Banks in Indonesia from 2016 to 2020 is considered very healthy. The st dev of 1.14% indicates that if there is a deviation the average is not greater than 1.14% or -1.14%.

Figure 1. Normality Results



Source: Data Processed, 2021

Normality test is useful to find out if the data is normally distributed or not, it is done by comparing the calculated JB probability value with an alpha level of 5%. If the probability value of JB is greater than 0.05, it can be concluded that the residuals are normally distributed and vice versa. From the normality test table above, it shows that the probability value of JB is 0.488 greater than 0.05, meaning that the data is normally distributed.

Table 2. Multicollinearity Results

	LDR	CAR	NPL	OEOI	NIM
LDR	1	0.3536	0.2766	-0.2299	0.0028
CAR	0.3536	1	-0.3685	0.0378	-0.2471
NPL	0.2766	-0.36851	1	0.3121	0.1424
OEOI	-0.2299	0.0378	0.3121	1	0.1418
NIM	0.0028	-0.2471	0.1424	0.1418	1

Source: Data processed, 2021

The multicollinearity test aims to test whether in the regression model there is a high or perfect correlation between the independent variables. A good regression model should not have a correlation between the independent variables. The results obtained from the multicollinearity test show that the correlation value between the independent variables is less than 0.80. Thus, it can be concluded that there is no multicollinearity problem between independent variables in the regression model.

Table 3. Heteroskedastisity Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.523531	0.548361	0.954719	0.3482
LDR	-0.000164	0.000634	-0.257887	0.7984
CAR	0.000898	0.006399	0.140324	0.8894
NPL	0.014829	0.036644	0.404678	0.6889
OEOI	-0.006731	0.005696	-1.181755	0.2476
NIM	0.068421	0.076009	0.900172	0.3760

Source: Data processed, 2021

The purpose of the heteroscedasticity test is to test whether in the regression model there is an inequality of variance from the residuals of one observation to another observation, which is still called homoscedasticity and if it is different it is called heteroscedasticity. To test the heteroscedasticity can be done by using the Glejser test. The results obtained from the heteroscedasticity test using the Glejser test indicate that the independent variable does not occur heteroscedasticity, this is proven to have profitability values of LDR, CAR, NPL, OEOI and NIM greater than 0.05. Thus, it can be concluded that the regression model does not occur heteroscedasticity.

Table 4. Data Panel Results

Variable	Coefficient		
C	6.263993		
LDR	-0.001018		
CAR	-0.012234		
NPL	0.136694		
OEOI	-0.062760		
NIM	0.301929		
Chow Test			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	12.301013	(7,27)	0.0000
Cross-section Chi-square	57.299928	7	0.0000
Hausman Test			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.

Cross-section random	42.536242	5	0.0000

Source: Data processed, 2021

Based on Table 4 above, the equations of the panel data in this study are as follows:
ROA = 6.263993 - 0.001018 LDR - 0.012234 CAR + 0.136694 NPL - 0.062760 OEOI + 0.301929NIM + e

In determining the panel data regression model, it is necessary to test the panel data regression model using the Chow Test, Hausman Test and Langrange Multiplier Test. Chow test decision making If probability (Chi-square cross section) < 0.05 (significance level = 5%) or probability value (F cross section) < 0.05 then H_0 is rejected or panel data regression does not use the common effect method. However, if the probability value (Chisquare cross section) > 0.05 (significance level = 5%) or the probability value (F cross section) > 0.05 then H_0 is accepted or panel data regression uses the common effect method. decision making Hausmann test If the chi-square statistic is greater than the chi-square table or the random cross section value <0.05, then H_0 is rejected. This means that the correct model for panel data regression is the fixed effect model.The Chow test was conducted to determine the appropriate common effect or fixed effect model for research. Cross-section F of 0.0000 < 0.05 with a significant level of 5%. This shows that the fixed effect model is better than the common effect model. With these results, it will be continued with the Hausmann test. The Hausmann test was conducted to select a better fixed effect or random effect model for this study. Cross-section random of 0.0000 < 0.05 with a significant level of 5% stated that the fixed effect model is better than the random effect model. With these results, it will be continued with the fixed effect Significance Test**.**

This constant of 6.263993 can be interpreted if the LDR, CAR, NPL, OEOI, and NIM variables increase constantly, then the ROA value is 6.263993. LDR has a value of 0.001018 with a negative sign, so for every 1 unit increase in LDR, ROA will decrease by 0.001018. CAR has a value of 0.012234 with a negative sign, so for every 1 unit increase in CAR, ROA will decrease by 0.012234. NPL has a value of 0.136694, meaning that for every 1 unit increase in NPL, ROA will increase by 0.136694. OEOI has a value of 0.06270 with a negative sign, meaning that every time there is an increase in OEOI by 1 unit, the ROA will decrease by 0.062760. NIM has a value of 0.301929, meaning that for every 1 unit increase in NIM, ROA will increase by 0.301929.

Table 5 t-Test

Independent Variable	Prob.	Tvalue	±ttable	Description
LDR	0.3728	-0.906260 > -2.03		Effect
CAR	0.2903	-1.078636 > -2.03		Effect
NPL	0.0448	2.104742 > 2.03		Effect
OEOI	0.0000	-6.216831 < -2.03		No effect
NIM	0.0334	2.241284 > 2.03		Effect

Source: Data processed, 2021

The t-test is a partial coefficient test that aims to determine the effect of each independent variable on the dependent variable with the assumption that all other independent variables are considered constant. In developing the hypothesis, H_0: the independent variable (X) has no significant effect on the dependent variable (Y) and Ha: the independent variable (X) has a significant effect on the dependent variable (Y). With a significance level of 5%. Meanwhile, to calculate the T table is used (α/2; n-k-1). In decision making, if probability < 0.05 and T count < T table then H_0 is rejected, then there is no significant effect between the independent variable and the dependent variable. If probability > 0.05 and T arithmetic > T table then H_0 is accepted, then there is a significant effect between the independent variables on the dependent variable. The results of the LDR test have a t value of -0.906. With the value of t table that is equal to -2.03. It means that t count -0.906 > t table -2.03 then H_0 is rejected. This

means that there is a significant effect of LDR on ROA. CAR has a t value of -1.078. With the value of t table that is equal to -2.03. It means that t count -1.078 > t table -2.03 then H_0 is rejected. This means that there is a significant effect of CAR on ROA. NPL has a t value of 2.104. With the value of t table that is equal to 2.03. It means that t count 2.104 > t table 2.03 then H_0 is rejected. This means that there is a significant effect of NPL on ROA. OEOI has a value of t count that is equal to -6,216. With the value of t table that is equal to -2.03. It means that t count -6.216 < ttable -2.03 then H_0 is accepted. This means that there is no significant effect of OEOI on ROA. NIM has a t value of 2.241. With the value of t table that is equal to 2.03. It means that t count 2.241 > t table 2.03 then H_0 is rejected. This means that there is a significant effect of NIM on ROA.

Conclusion

Based on the author's research and the discussion that has been described, which aims to analyze the factors that affect the profitability of foreign commercial banks in the 2016-2020 period, several conclusions can be drawn: LDR, CAR, NPL and NIM can affect the profitability of foreign commercial banks in Indonesia in the 2016-2020 period. Meanwhile, OEOI did not affect the profitability of foreign commercial banks in Indonesia for the 2016-2020 period. Results Based on the research that has been done. The author would like to provide recommendations to Foreign Commercial Banks in Indonesia Paying attention to asset quality management by solving problematic problems, so that banks are able to suppress bad loans, because credit is the main factor in poor bank performance. In addition, banks can also expand the market, by increasing credit to obtain higher interest income. As well as increasing net interest income and streamlining productive assets owned by balancing them with net income. Academics are expected to be able to develop research by adding several other variables to obtain actual conditions regarding the factors that affect the profitability of foreign banks in Indonesia for the 2016-2020 period.

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Job Satisfaction as a Mediator Between Compensation and Motivation on Driver Online Performance

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Abstract

Globalization requires online driver companies to always provide the best innovation and service to their customers because online driver competition is already very competitive. After all, many companies offer increasingly creative services. But on the other hand, motorcycle taxi drivers as company partners play an important role in supporting the company's success, because if the driver-partners do not have good performance, customers will not be loyal and will move to other driver online companies. Therefore, this study examines the impact of compensation and motivation on employee performance and to see whether job satisfaction gives a mediating impact on the relationship between compensation and motivation on employee performance. The data were collected from 340 drivers online in Bandung, using four (4) Likert scales. The study was carried out in a confirmatory framework to examine the causal linkage among variables. The results showed a positive relationship between compensation and motivation on employee performance. Further, the study showed the emergence of job satisfaction as a mediator in enhancing effectiveness compensation employee performance but on the contrary job satisfaction can mediate the relationship between motivation and performance.

Keywords: compensation, motivation, job satisfaction, employee performance, driver online company

Introduction

Globalization and the industrial era 4.0 have brought many changes to human life in all countries. Technological developments in electronic commerce (e-commerce) are one of the most significant impacts. The convenience and convenience offered by various e-commerce platforms have made many parties turn away from face-to-face transactions. One of the most significant e-commerce platforms in development in Indonesia is online transportation services. Especially with the internet penetration in Indonesia in 2021 reaching 73.7% (Riyanto, 2021), the opportunity for providers engaged in the digital-based transportation business is very large.

In addition to the reliability of the technology used in the online transportation business, the performance of driver-partners is also a determinant of the success of the online transportation business, because driver-partners deal directly with customers as service users. Therefore, it is important for online transportation companies to always pay attention to the performance of their driver-partners. Employee performance is a critical characteristic that must be observed, managed, and assessed by management for the organization to advance and achieve its objectives (Rukayah and Majid, 2011). Putri and Idulfilastri (2020) found that the performance of driver partners in online transportation companies has decreased, and this will certainly have an impact on companies and service users. Based on secondary data obtained from PT XXX driver-partners in Bandung, it was found that the performance of driver-partners decreased in 2020 but in 2021 there was an increase, this indicates that the performance of driver-partners is unstable, this could be due to the impact of the COVID-19 pandemic and the increasing number of company competitors. online motorcycle taxi

In online transportation companies, the performance of driver-partners is the key in the online ride-hailing business. PT XXX determined that the satisfaction of service users determines the performance of the driver-partners. The better the performance of the driver-partners, the more service users there will be. Therefore, it is very important to know what factors can improve the performance of these driver-partners. Previous studies have proven that performance can be influenced by several factors, including motivation (Kiruja and Mukuru, 2018; Wulansari and Rahmi 2019), employee engagement (Ali, Sabir & Mehreen, 2019, Wardani and Wulansari 2021), compensation (Kuvaas, Buch

and Dysvik, 2020), job design and job satisfaction (Siengthai & Pila-Ngarm, 2016). Meanwhile, Putri and Idulfilastri (2020) stated that for driver-partners in Jakarta, Bogor, Depok, Tangerang, and Bekasi (Jabodetabek) personality traits and quality of work-life can affect the performance of driver-partners.

Moreover, many researchers have researched the effect of compensation and motivation (Agusta, Lussianda & Susanti, 2021; Rosalia and Heksarini (2020; Sitopu, Sitinjak, and Marpaung, 2021). Compensation provided by the company to employees will have a positive impact on employee performance. Providing adequate compensation is one strategy to increase work motivation, job satisfaction and ultimately will improve employee performance. Rosalia et al (2020) found that job satisfaction can affect performance. And this study also examines the relationship between compensation, motivation, job satisfaction on performance. However, it does not test whether job satisfaction can mediate the relationship between compensation and work motivation on performance. Job satisfaction has been used as a mediator variable in several studies including Rukayah and Idris et al (2020), Newman et al, (2015), Khalida and Safitri, 2016, Prasetio et al, 2018.

The performance of partner drivers plays an important role in the development of PT XXX's business in Bandung. Factors that affect performance in the research formulating are influenced by motivation and compensation. So it is hoped that if PT XXX can provide adequate compensation for driver-partners, it will increase their motivation to be more loyal in partnering with PT XXX. In addition, with job satisfaction as a variable mediator, with compensation and motivation and added job satisfaction, the performance of the driver-partners will increase even more.

Literature Review

1. Compensation, Job Satisfaction, and Kinerja

Compensation is something that employees receive for the services they contribute to their work. They donate what they think is valuable, both energy and knowledge. Compensation is a form of reward received by employees for the efforts they produce (Edison et al., 2018:152). In providing compensation, what needs to be considered is that compensation must be appropriate, fair, acceptable, satisfying, motivating to work, rewarding, and based on needs. Compensation will provide benefits for both parties, both for the company and the employees themselves. Mabaso and Dlamini (2017) emphasize that employees who receive appropriate compensation will get job satisfaction. So that job satisfaction can affect employee happiness, morale, and motivation in increasing work motivation (Zhang, Cai, Jia & LI, 2018).

Several studies have proven a positive and significant relationship between compensation, job satisfaction, and performance. Compensation has a positive impact on employee performance (Anderson et al., 2018). Increased compensation will have a positive impact on employee satisfaction which will also affect employee performance (Chong & Leung, 2018; Jiang & Zhang, 2018).

Hypothesis 1: There is a significant effect between compensation and job satisfaction.

Hypothesis 2: There is a significant effect between compensation and employee performance

Hypothesis 3: There is a significant effect between compensation and employee performance through job satisfaction.

2. Work Motivation, Job Satisfaction, and employee performance.

Work motivation is an urge that arises in a person, either consciously or intuitively, to urge them to take action toward a specific objective (Riyanto et al, 2021). Work motivation theory is usually associated with justification, not ability; that is, some people when compared to others can get a good job done (Dal Forno & Merlone, 2010).

Employees would conduct official jobs that satisfy their needs (Shahzadi et al., 2014), which in turn support their connected organizations (Twalib and Kariuki, 2016). As a result, work motivation serves as a motivator for employees to contribute as much as possible to the achievement of organizational goals.

Rozzaid et al. (2015) found that compensation and work motivation had a significant positive relationship to partially or simultaneously job satisfaction. In addition, research conducted by Tandu et al. (2016) on organizations in Nigeria stated that there was a significant influence between motivation and job satisfaction. Another study by Mahmood (2016) states that the results of research conducted on several employees in different workplaces in Iraq are that there is a significant influence between work motivation and job satisfaction.

To increase performance, managers target and focus on their employees' well-being to motivate them to work more. This is an attempt to please the workers (Shahzad, Farrukh, Kanwal, & Sakib, 2018). Thus, the hypothesis is proposed as follows.

Hypothesis 4: There is a significant effect between work motivation and job satisfaction.

Hypothesis 5: There is a significant effect between job satisfaction and employee performance.

Hypothesis 6: There is a significant effect between work motivation and employee performance.

Hypothesis 7: There is a significant effect between work motivation and employee performance through job satisfaction.

The following conceptual framework is based on theoretical and empirical understanding:

Figure 1: Conceptual Framework

Methodology

This study empirically explores the mediating effect of job satisfaction on the influences of compensation and motivation on employee performance of driver partners at PT XXX Bandung, Indonesia. The population for this study is all driver-partner PT XXX at Bandung with about 15.000 people. The sampling method in this study is using convenience sampling, and the sample was determined by Isaac and Michel's table (Sukarweni, 2015:83). Data collection is done using the technique of sending questionnaires directly to respondents and helping respondents to fill out questionnaires. The analysis model used is the structural equation model (SEM) with the basis of theories and concepts, with Partial least Squares (PLS)

For the measurement of employee performance, this study used 14 items from Bernadin & Russel (Busri, 2018). Job satisfaction was assessed based on Prasetio et al (2019) with 15 items. Compensation used 14 items based on Edison et al (2018). And work motivation used 15 items based on Riyanto and Endri (2021). To assess all variables measured using a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). All of the variable items have validity scores up to 0,6.

The demographic profile for respondents is indicated by table 1 is as follows.

Table 1. Demographic Profile for respondents (*n* =340)

Variables	Categories	%
Gender	Male	94
	Female	6
Age	< 20	1
	21 - 30	55
	31 - 40	34
	41 - 50	10
	>50	0
length of work	< 1	18
	1 - 2	66
	3 - 4	16
	> 5	0

Results

The outer model test findings are discussed in the following section, which uses the SmartPLS analysis tool to calculate the outer loading value.

The reliability test is important for computing the indicator block's composite reliability value, which gauges the build. It is considered satisfactory if the composite reliability computation yields a number greater than 0.7.

Table 2 Result of the measurement model

Construct	Indicators	Outer Loading	Cronbach's alpha	Composite reability	Average Variance Extracted (AVE)
EP	EP.1	0.610	0.862	0.867	0.909
	EP.2	0.601			
	EP.3	0.513			
	EP.4	0.590			
	EP.5	0.490			
	EP.6	0.510			
	EP.7	0.631			
	EP.8	0.592			
	EP.9	0.399			
	EP.10	0.613			
	EP.11	0.390			
	EP.12	0.715			
	EP.13	0.810			
	EP.14	0.601			
C	C.1	0.572	0.852	0.859	0.864
	C.2	0.513			
	C.3	0.512			
	C.4	0.500			
	C.5	0.521			
	C.6	0.434			
	C.7	0.399			
	C.8	0.615			
	C.9	0.656			
	C.10	0.763			
	C.11	0.545			
	C.12	0.768			
	C.13	0.378			
	C.14	0.415			

Construct	Indicators	Outer Loading	Cronbach's alpha	Composite reability	Average Variance Extracted (AVE)
WM	WM.1	0.515	0.881	0.880	0.901
	WM.2	0.742			
	WM.3	0.654			
	WM.4	0.663			
	WM.5	0.652			
	WM.6	0.712			
	WM.7	0.765			
	WM.8	0.655			
	WM.9	0.672			
	WM.10	0.762			
	WM.11	0.765			
	WM.12	0.512			
	WM.13	0.623			
	WM.14	0.701			
	WM.15	0.502			
JS	JS.1	0.623	0.898	0.900	0.912
	JS.2	0.634			
	JS.3	0.523			
	JS.4	0.645			
	JS.5	0.675			
	JS.6	0.712			
	JS.7	0.500			
	JS.8	0.512			
	JS.9	0.589			
	JS.10	0.689			
	JS.11	0.681			
	JS.12	0.656			
	JS.13	0.312			
	JS.14	0.532			
	JS.15	0.624			

Table 4 displays the output's composite reliability values. The results of the calculations show that all variables have a composite reliability value of greater than 0.7, indicating that all variables are realistic. That table also shows the recommended value is above 0.6, where Cronbach's alpha > 0.6 and the lowest value is 0.850 meaning that it meets the desired criteria.

The next stage is to assess the model's Goodness of Fit (GFM). The GFM method is used to confirm that endogenous variables can explain the diversity of exogenous variables. To determine the contribution of exogenous variables to endogenous variables, the following table 7 uses the Q2 value (Q-square predictive relevance).

Table 3. The Goodness of Fit Model

Variables	R^2
Job Satisfaction	0.140
Employee Performance	0.638
$Q^2 = 1 - (1 - R^2) \times (1 - R^2)$	
$Q^2 = 1 - 0.581$	
$Q^2 = 0.419$	

The employee performance variable has an R2 value of 0.638 or 63.8 percent. This suggests that 63.8 percent of the variance in employee performance can be explained by remuneration, work incentive, and job satisfaction variables. Then there was 36.2 percent influence from other variables that were not considered in this study. Meanwhile, the work satisfaction variable's R2 value is 0.140, or 14% in proportion. This demonstrates that the variable remuneration may be used to define job happiness, and work motivation can be described by 14 percent. Meanwhile, other factors that are not considered in this study account for the remaining 86 percent.

This study will use factors that can, directly and indirectly, affect the driver-partner performance of PT XXX Bandung to observe the factors that influence job satisfaction and employee performance. Compensation, motivation, and work satisfaction are the variables used to reflect these characteristics. Variables are defined first and then how they can directly or indirectly affect employee performance.

Table 4 Direct Effect Test

Variable	Original Samples	Sample Mean	Standard Deviation	T-Statistics	P-Values	Conclusion
Compensation → Job Satisfaction	0.912	0.907	0.069	9.120	0.000	Received
Compensation → Employee Performance	0.613	0.627	0.158	2,998	0.003	Received
Work Motivation → Job Satisfaction	-0.133	-0.102	0.081	1.453	0.116	Rejected
Job Satisfaction → Employee Performance	0.548	0.524	0.154	3.109	0.001	Received
Work Motivation → Employee Performance	0.121	0.158	0,0161	0.798	0.368	Rejected

In comparison to t-tables and t-statistics, the magnitude of the significance of the hypothesis of residence can be used. The hypothesis is supported if the t-statistic value is higher than the t-table value. The t-table value for the one-tailed hypothesis is >1.96 at 95 percent confidence (alpha 5%). As a result, if the t-statistic value is greater than 1.96, the study hypothesis is supported.

The smart PLS program is carried out by t-test on each track. The test results can be seen in table 4 and table 5.

Table 5 Indirect Effect Test

Variable	Original Samples	Sample Mean	Standard Deviation	T-Statistics	P-Values	Conclusion
Compensation → Job Satisfaction → Employee Performance	0.512	0.518	0.169	3.012	0.001	Received
Work Motivation → Job Satisfaction → Employee Performance	-0,067	0.065	0,049	1.299	0.181	Rejected

Table 8, in general, show that compensation either directly or indirectly impacts job satisfaction and employee performance. In contrast, the work environment has no direct or indirect impact on job satisfaction and employee performance. Furthermore, it indicates that Job satisfaction cannot mediate

work motivation and employee performance. However, it can mediate the correlation between compensation and employee performance.

Discussion

Compensation, job satisfaction, and Employee Performance

The significance value between the constructs, t-statistics, and p-values are used to accept or reject hypotheses. Standard errors and measurement estimates are no longer determined based on statistical assumptions, but rather on empirical observations, as a result of the test findings. The hypothesis is accepted in the bootstrap resampling procedure if the significance value of the t-value is larger than 1.96 and the p-value is less than 0.05, and vice versa.

Table 8 shows that compensation affects job satisfaction where the t-statistic value is 9.120 > 1.96). The estimated value of the original sample is 0.912 which indicates the relationship between compensation and job satisfaction is positive. The probability value obtained is 0.000 (< 0.05). Thus, H1 is received: there is the effect of compensation on job satisfaction. Table 8 shows that compensation affects employee performance where the t-statistic value is 2,998 (>1.96). The estimated value of the original sample is 0.613 which indicates the relationship between compensation and employee performance is positive. The probability value obtained is 0.003 (< 0.05). Thus, H1 is received: there is the effect of compensation on employee performance.

This finding indicates that the driver-partner at PT XXX Bandung feels quite satisfied with the compensation given. This is evidenced by the high level of respondents' assumptions about PT XXX Bandung's incentives. Furthermore, this research asserts that PT XXX Bandung's high compensation for driver-partners motivates employees to perform well.

Compensation gives a positive influence on employee performance through job satisfaction with a value of 0.512, it can be seen that compensation provides a significant effect on employee performance through job satisfaction due to t-statistics (3.012 > 1.96), so the results of the hypothesis state compensation in indirect significantly influence employee performance through job satisfaction.

These findings support several previous studies related to the link between compensation, satisfaction, and performance. Compensation affects employee performance (Anderson et al., 2018; Buachoom, 2017; Salisu et al., 2015). Increased pay has a major impact on employee happiness, which in turn has an impact on employee performance. (Chong & Leung, 2018; Jiang & Zhang, 2018; Martinson & De Leon, 2018).

Work Motivation, job satisfaction, and Employee Performance

Work motivation gives a negative influence on job satisfaction with a value of -0.133, it can be seen that compensation gives no significant effect on job satisfaction because of t-statistics (1.453 < 1.96), so the results of the study are not in line with the hypothesis which states work motivation directly significant effect on job satisfaction.

Work motivation gives a positive influence on employee performance with a value of 0.121, it can be seen that work motivation gives no significant effect on employee performance because of t-statistics (0.798< 1.96), so the results of the study are not in line with the hypothesis which states work motivation directly significant effect on employee performance.

Job satisfaction gives a positive influence on employee performance with a value of 0.548, it can be seen that job satisfaction gives a significant effect on employee performance due to the results of hypothesis testing (3.109> 1.96), so the results of the study are in line with the hypothesis which states job satisfaction directly significant effect on employee performance.

Work motivation provides a negative influence on employee performance through job satisfaction with a value of -0.067, it can be seen that work motivation does not give a significant effect on employee performance through job satisfaction due to t-statistics (1.299 < 1.96), so the results of the study are not in line with motivation indirectly significant effect on employee performance through job satisfaction

Conclusion

To increase job satisfaction and employee performance, PT XXX Bandung needs to pay attention to factors that can influence. The variable studied was found to be able to influence job satisfaction is compensation. Compensation given to employees in agencies needs to be maintained. Management allows increasing compensation that has not been maximized, providing opportunities. Such as more bonuses for those drivers partner who has a high performance.

Meanwhile, job satisfaction as a mediating variable in work motivation and employee performance is not proven. This means that even though work motivation is increased for driver-partners it doesn't improve their performance. Management allows increasing motivations that have not been maximized. providing opportunities is another beneficial alternative that could give them motivation.

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Implementation Analysis Of Digital TransformationStrategy In People Factor On Bank Rakyat Indonesia (Case Study Of Bank Rakyat Indonesia Denpasar Regional Office)

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Abstract

This research is motivated by problems related to advances in digital technology that do not always provide benefits. Entering industry 4.0, all business sectors carry out digital transformation to the level of corporate strategy, without exception in the banking sector. Bank Rakyat Indonesia (BRI) is one of the banks that implements the Digital Transformation Strategy in all its bank areas, including the BRI Denpasar Regional Office. The method used in this study is a qualitative method with the type of research used is descriptive verification using observation, depth interviews, and documents as primary and secondary data that will be processed to obtain results of analysis of strategy implementation with a cross sectional time span. This study concludes that the analysis of the implementation of the Digital Transformation Strategy of Bank Rakyat Indonesia (BRI), especially the Denpasar Regional Office, has four main factors that play an important role, namely Technology, Process, Human Resources, and Culture which are the focus of discussion in this thesis.

Keywords: Digital Transformation, Digital Transformation Strategy, Strategy Implementation.

Introduction

Bank Rakyat Indonesia (BRI) is one of the largest state-owned banks in Indonesia. Initially, Bank Rakyat Indonesia (BRI) was established in Purwokerto, Central Java by Raden Bei Aria Wirjaatmadja under the name De Poerwokertosche Hulp en Spaarbank der Inlandsche Hoofden or "Priyayi Savings and Aid Bank of Purwokerto", a financial institution that serves the national community. This institution was established on December 16, 1895, which later became the birthday of BRI.

Figure 1 Logo Bank BRI Source : www.bri.co.id , 2021

A logogram with an equilateral square shape denotes balance. At the same time, the rounded lines signify the dynamics or flexibility in addressing the changing times. The

lines and shape of the lettering of 'BRI' are made from straight lines that denote the firmness of BRI in sustainably being present and serving all Indonesians.
The counseling process is carried out by a special team that has been appointed from thecenter which then spreads to all parts of the BRI area to make notifications and explain how to implement/implement the strategy, but during the pandemic everything is done digitally through the media *platform zoom* or the like so as to create uniformity in each part of the region. and branches of BRI (Wiraputra, 2021).

Table 1.1 Rating and Number of Reviews at BRI Regional Office 2021

BRI Kantor Wilayah	Rating	Jumlah Ulasan
Jakarta 1	3,8	9
Jakarta 2	4,2	42
Jakarta 3	4,0	52
Bandung	4,6	83
Semarang	4,3	63
Jawa Timur	4,3	4
Surabaya	3,3	3
Denpasar	3,1	110
Banjarmasin	3,4	67

Source: Author's Data Process, 2021

Based on the table above, we can see that Bank BRI Denpasar Regional Office has the lowest rating of 3.1 with a total of 110 reviews. Of the 110 reviews there are 48 comments17 related to services, 11 related to queues, 8 related to ATM machines, 5 related to personnel, and 4 other related. The following is an example of a negative review at Bank BRI Denpasar Regional Office.

Figure 1.9 One Review of BRI Denpasar Regional Office
Source: (Google, 2020)

Based on the above review, there are problems with the implementation of DTS at the BRI Denpasar Regional Office, namely the use of digital technology. Based on the description, Mrs. Sinta said that the problem of implementing DTS to distribute to

consumers and introducing the Brimo application was due to one of the obstacles in the office wifi network, besides that the Brimo application on an unstable network made the application operate for a long time (Sinta, 2021) . Therefore, researchers are interested in seeing how the implementation of DTS at BRI Denpasar Regional Office.

Literature Review

1. **Digital Transformation**
   Digital Transformation is a deep transformation of business and organizational activities, processes, competencies and models to fully take advantage of the changes and opportunities of the integration of digital technology and its acceleration of impact on society in a strategic and prioritized way, taking into account current and future changes (Echeberria, 2020).
2. **Strategy Management**
   (Certo, 2010) defines strategic management as the analysis, decisions, and actions taken by the company to create and maintain competitive advantage. This definition describes the two main elements of strategic management.
3. **Digital Business Strategy**
   Digital business strategy is no longer an optional issue for traditional companies battling tough competition in a fast-changing corporate environment. Having an effective digital business strategy is essential for organizations to thrive in an age when digital technology has transformed markets and given rise to new business models. Digital strategy focuses on using technology to improve business performance, whether that means creating new products or redesigning current processes. It determines the direction the organization will take to create a new competitive advantage with technology, as well as the tactics that will be used to achieve this change. This usually includes changing business models, as new technologies allow innovative companies to provide services that were previously impossible. Digital strategy is the use of internet-based platforms and data to inform and implement online communication goals that meet organizational goals. An organization's digital strategy must parallel its overall communications strategy, which includes traditional strategies. Digital strategy is an approach in which organizations use online platforms and digital data to meet marketing, advertising, and/or public relations goals and objectives. Often digital strategies use big data to direct content and messages to highly targeted and specialized audiences in the online space. Online spaces are typically user-driven platforms and for organizations and users to interact with. Several different tactical elements can be used to implement a digital strategy, including social networking sites, websites, email newsletters, search engines, search engine optimization, paid influencer programs, mobile apps, analytics and metrics, and more. All types of organizations, including non-profit, non-profit, government, and activist organizations use digital strategies in their strategic communication programs (Correani et. al, 2020).

4. Digital Transformation Strategy

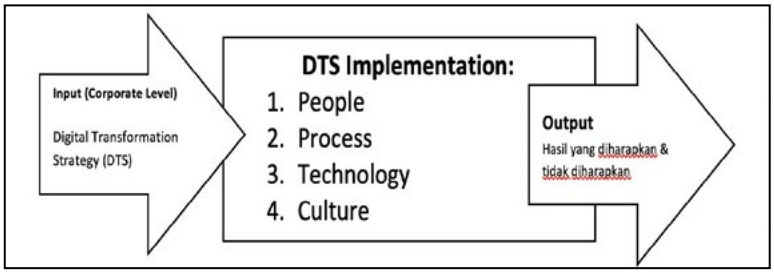

Figure 2.1 Critical Framework Implementation DTS

Source: Author's Data Process, 2021

Two Perspectives on Digital Transformation Strategy and Strategic planning refer to the process of defining strategy as well as deciding which resources to allocate to pursuing strategies to achieve company goals. While the procedural aspects govern the development, implementation and evaluation of digital transformation strategies, due to their new character, it is first necessary to determine which aspects of the content should comprise the digital transformation strategy. The following four key dimensions and the resulting overarching framework are the result of the initial work, including an analysis of the literature and several case studies and interviews. (Correani et. al, 2020).

Research Methods

In this study using qualitative research methods with the type of descriptive research. According to Sugiyono (2019:23) the type of descriptive research is research that describes or analyzes a research effort but is not used to make broader conclusions (Sugiyono, 2019:37) descriptive method is a framework for carrying out an action, or a frame of mind to develop ideas that are directed and related to goals and objectives. The method used in this study is qualitative with descriptive research objectives, namely to explain phenomena that occur in society in depth by collecting in-depth and complete data based on data collection techniques of observation, documentation and interviews.

This study will use a cross sectional design where data collection is carried out in one period, namely elements involved in the banking sector.

Table 3.1 Research Character

No.	Research Character	Type
1	Based on Paradigm	Interpretivism
2	Based on Method	Qualitative
3	Based on Purpose	Descriptive
4	Based on Unit Analyst	Individu
5	Based on Enforcement Time	Cross Sectional

Source: Researcher Process, 2021

Research Stages, Data Collection Techniques and Sources

1. Research Stages

This research begins with the phenomenon that competition in the banking industry has begun to increase with the emergence of the use of digital technology, where banks and other financial institutions whose operational activities are still conventional will find it difficult to compete if they do not innovate and banking in Indonesia with a digital strategy transformation that will regulate the role or relationship of each actor, process, and culture in a banking company. Thus, to understand how to implement a digital transformation strategy at Bank Rakyat Indonesia Denpasar Regional Office as the object of research, interviews were conducted with several parts of the company's organizational structure.

2. Data Collection Techniques

According to Sugyono (2019: 455-456), data collection techniques are the most important step in research, because the main purpose of research is to obtain data. Without knowing the data collection techniques, the researcher will not get data that meets the data standards set. Data collection can be done with various settings, various sources, and various ways. In general, there are four kinds of datacollection techniques, namely observation, interviews, documentation, and acombination of triangulation.

3. Source

According to Ibrahim (2015: 67) in Fernando and Siska (2020), data are all forms of information, facts and reality related to what is being researched or studied. While data sources are people, objects or objects that can provide data, information, facts and realities that are related/relevant to what is being studied orresearched. The data in the study can be classified into two (2) resources, namely:

a. Primary data

Primary data is all information, facts and reality that are related or relevant to research, where the link or relevance is very clear, even directly. In qualitative research, the main data sources are the words and actions that are observed or interviewed.

b. Secondary data

Secondary data are all forms of documents, both in written form and photos. Thedata sources in question include dissertations, theses and theses that are able to provide an overview of the condition of a person or community where the researchis carried out. In addition, of course, scientific magazines, including scientific journals that make the results of studies and research that can provide initial information for a research conducted. In qualitative research, data sources are

obtained from primary data and data collection techniques are carried out in the following ways:

a. Observation

Observation techniques make it possible to record behavior or events when those behaviors and events occur (Ahmadi, 2014:162). In this study, observations weremade at the BRI Denpasar Regional Office as the object of research.

b. Interview

According to Patton in Ahmadi (2014:162) to understand people's perceptions, feelings and knowledge is an in-depth and intensive interview.

c. Documentation

Documentation is a record of events that have occurred. Documents can be in theform of writing, pictures or monumental works of someone. Documentation studies are a complement to the use of observation and interview methods in qualitative research (Sugiyono, 2017: 82). In this study, supporting documents such as bank training data, investment law and banking law as well as data on internet users in BRI Regional Office Denpasar. Other documents are data in the form of cooperation with various sectors and institutions, annual income and totalcustomers (savings and loans).

RESULTS AND DISCUSSION

In this chapter the researcher will describe the research results obtained during the research process carried out in the field for approximately two months, from June 30 to August 29, 2021. This type of research is descriptive qualitative using data collection techniques using: observation, interviews, documentation , and the triangulation combination.

1. Informan 1
   Name : Kusdinar Wiraputra
   Position: Deputy Regional Head for Business
   Division : Management Bagian
   Office : BRI Denpasar Regional Office

This interview was conducted by the researcher in the Room of the Deputy Regional Head for Business Division of BRI Denpasar on July 1, 2021. In selecting informants, researchers have determined the criteria so that the information that researchers can have accurate data validation. Mr. Kusdinar as the Deputy Head ofthe Business Sector has the authority to make decisions that are implemented in theoffice and approvals related to work or policies that will be carried out or implemented and proposed in the office.

Interviews were conducted by question and answer in a discussion that was

directed according to the topic to answer research questions. The following is a summary of the results of the interview with Mr. Kusdinar.

Table 1 Results of Informan Interviews 1

No	List of questions	Answer
1	What is your role in the DTS initiative?	"In the process of strategic initiatives, the central government usually prepares them, as Wapinwil what I do is ensure that the strategies that have been decided are implemented properly in the office. However, related to the evaluation, there is already its own division that monitors it."
2	Who is involved in making DTS?	"In making DTS BRI has its own division, namely the Digital Transformation section which is located at the BRI Headquarters."
3	How does the team plan for DTS? How about planning activities?	"In the DTS plan, it is prepared by the Digital Transformation section at BRI Headquarters"
4	With everything you know what system/part would you like to change if you were authorized to make changes? why?	"The Brilliant application section sometimes does not support certain devices so it takes a long time and makes us managerial unable to immediately do *approval* "
5	Are there any experiences/comments regarding DTS that you would like to share?	"The DTS at BRI has been around since 2015 from the business section, which is very helpful, especially in the MSME program that we are focusing on."

2. Informan 2
   Name : Haryono Position:
   Head of Section
   Division : Risk Management and Compliance
   Office : BRI Denpasar Regional Office

The researcher conducted this interview in the Coffeeshop Room of the BRI Denpasar Regional Office on July 1, 2021. In selecting informants, the researchers had determined the criteria so that the information that the researcher obtained could have accurate data validation. Mr. Haryono as the head of the Risk Management

and Compliance Division has the authority/position function to foster and socializethe risk management process, assess risk profiles and exposures, monitor and analyze the implementation of strategies from the center at the Denpasar Regional Office in accordance with the provisions and targets that have been set. .

Interviews were conducted by question and answer in a discussion that was directed according to the topic to answer research questions. The following is a summary of the results of the interview with Mr. Haryono.

Table 2 Informant Interview Results 2

No	List of questions	Answer
1	What is your role in the DTS initiative?	"In the process of strategic initiatives, the central government usually prepares them, as the head of the MR department, what I do is socialize and monitor the strategy"
2	Who is involved in making DTS?	"In making DTS, BRI has its own division, namely the Digital Transformation section which is located at the BRI Headquarters. From our point of view, we are observers of how BRI employees obey the rules."
3	How does the team plan for DTS? How about planning activities?	"In the DTS plan, it is prepared by the Digital Transformation section at BRI Headquarters"
4	With everything you know what system/part would you like to change if you were authorized to make changes? why?	"The Brilliant application section sometimes does not support certain devices so it takes a long time and makes us managerial unable to immediately do *approval* "
5	Are there any experiences/comments regarding DTS that you would like to share?	"The DTS at BRI has been around since 2015 from the business section, which is very helpful, especially in the MSME program that we are focusing on."

3. Informants 3
   Name : Sinta
   Position: Head of Section
   Division : BRILink
   Office : BRI Denpasar Regional Office

The researcher conducted this interview in the Coffeeshop Room of the BRI Denpasar Regional Office on July 1, 2021 after interviewing Mrs. Sinta. In selecting informants, researchers have determined criteria so that the information that researchers can have accurate data validation. Mrs. Sinta as the head of the BRILink division has the authority to identify, formulate, implement, monitor, evaluate strategies for the BRILink division from the center at the DenpasarRegional Office.

Interviews were conducted by question and answer in a discussion that was directed according to the topic to answer research questions. The following is a summary of the results of the interview with Mrs. Sinta.

Table 3 Informant Interview Results 4

No	List of questions	Answer
1	What is your role in the DTS initiative?	"In the process of strategic initiatives, the central government usually prepares them, as the Head of the BRILink Division, what I do is ensure that the strategies that have been decided are implemented properly in the office. However, related to the evaluation, there is already its own division that monitors it."
2	Who is involved in making DTS?	"In making DTS BRI has its own division, namely the Digital Transformation section which is located at the BRI Headquarters."
3	How does the team plan for DTS? How about planning activities?	"In the DTS plan, it is prepared by the Digital Transformation section at BRI Headquarters"
4	With everything you know what system/part would you like to change if you were authorized to make changes? why?	"The Brilliant application section sometimes does not support certain devices so it takes a long time and makes us managerial unable to immediately do *approval* "
5	Are there any experiences/comments regarding DTS that you would like to share?	"The DTS at BRI has been around since 2015 from the business section, which is very helpful, especially in the MSME program that we are focusing on."

Implementation of the Digital Transformation Strategy seen from the People factor as the focus in BRI's transformation that has been carried out since 2015. The implementation of digital transformation is seen from the people factor in the occurrence of digital transformation at BRI Denpasar Regional Office, namely each part has a role and has contributed according to its role. In the processof counseling BRI employees in Denpasar is easy, especially for the younger generation and the older generation takes a relatively longer time to implement.

Data Triangulation

In testing the validity of the data, the researcher uses a triangulation technique, namely checking the validity of the data that utilizes something other than the data to check or as a comparison to the data and the most widely used triangulation technique is by checking through other sources.

1. **Additional resource persons from BRI Head Office**

   Name : Agus Hendi Setiawan
   Position: Staff
   Division : Corporate Development Strategy
   Office : BRI Head Office

This interview the researcher conducted in the Coffeeshop Room of the Central BRI Office on August 21, 2021. In selecting informants, the researchers had determined the criteria so that the information that the researcher could provide accurate data validation. Mr. Agus as a staff of the *Corporate Development Strategy* has the authority to evaluate the implementation of the strategy from the center at the Denpasar Regional Office.

Interviews were conducted by question and answer in a discussion that was directed according to the topic to answer research questions. The following is a summary of the results of the interview with Mr. Agus.

Table 4 Interview Results of Additional Informants 1

No	List of questions	Answer
1	What is your role in the DTS initiative?	"In the process of strategic initiatives, the central government usually prepares them, as a CDS staff what I do is to ensure that the strategies that have been decided are well implemented in the office. However, related to the evaluation, there is already its own division that monitors it."

No	List of questions	Answer
2	Who is involved in making DTS?	"In making DTS BRI has its own division, namely the Digital Transformation section which is located at the BRI Headquarters."
3	How does the team plan for DTS? How about planning activities?	"In the DTS plan, it is prepared by the Digital Transformation section at BRI Headquarters"

Based on the results of the researcher's observations and the results of interviews from the first informant to the sixth informant and one additional informant, the researchers made the following discussion.

Digital strategy is an approach in which organizations use online platforms and digital data to meet marketing, advertising, and/or public relations goals and objectives. Often digital strategies use big data to direct content and messages to highly targeted and specialized audiences in the online space. Online spaces are typically user- driven platforms and for organizations and users to interact with. Several different tactical elements can be used to implement a digital strategy, including social networking sites, websites, email newsletters, search engines, search engine optimization, paid influencer programs, mobile apps, analytics and metrics, and more. All types of organizations, including non-profit, non-profit, government, and activist organizations use digital strategies in their strategic communication programs (Correani et. al, 2020). based on this theory, in accordance with BRI's managerial explanation and additional informant 2 that the purpose and purpose of digital transformation is to facilitate interaction in which there is a push factor from the community.

CONCLUSION

The conclusions that can be drawn from this research are The implementation of the digital transformation strategy seen from the people factor at BRI Bank is going well where everyone has their own role. At Bank BRI, the employees are referred to as BRIloans/BRI personnel, where they are the Best Talents who have passed a rigorous selection process. In the digital transformation strategy, BRIlian has an important role. The obstacle during implementation is that there are some seniors who have difficulty keeping up with the latest technology, but according to Mr. Haryono as MR, this has been overcome over time and through continuous counseling.

Suggestions

1. The researcher hopes that further research that examines the same thing will be able to examine the implementation of digital transformation strategies from other banking companies, because every banking company must have a different choice

of transformation strategy to face competition, so that further research can expand the exposure of the study of the implementation of digital strategy transformation.

2. Researchers hope that BRI can continue to develop the technology used and if it can be shared with other banking companies to support the progress of the Indonesian banking industry as long as it does not harm the company, in addition to the internet at the Denpasar area office, it is better to use a timed internet systemlisted on the queue number so that the internet can be used for a certain period but has very good quality so as to speed up front office transactions.
3. The researcher suggests that for the process of implementing the transformation strategy that has been set by the center, it is better if there are employees who are difficult to follow developments to be rotated into positions that can better adapt to their abilities or regenerate employees who have been selected and educated byBRI.

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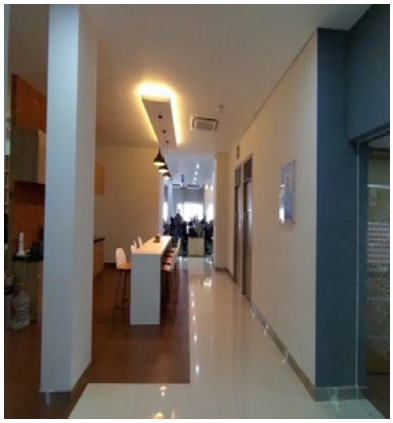
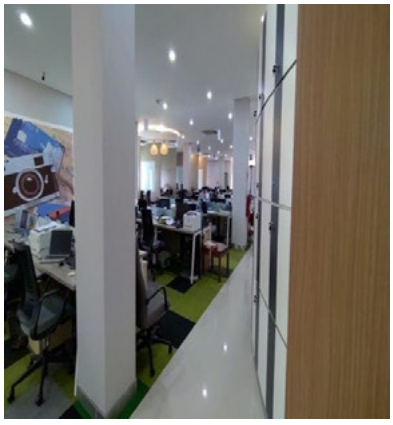
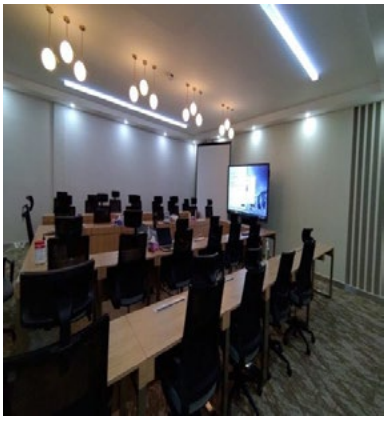
Appendix
Documentation

Analysis Of Information System Implementation Warehouse Management System - Selog With Delone & Mclean Approach

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Abstract

Digital transformation has changed several business processes in the corporate environment to digitalization. One of the domains of digital transformation is information systems. PT. Serasi Logistik Indonesia has implementing an information system in its business processes it call Warehouse Management System (WMS)-Selog. However, during the implementation process, no one has ever conducted an analysis related to the successful implementation of WMS-Selog on employee work performance. So it is necessary to analyze the success of the information system from the perspective of the user as a WMS-Selog user.

This research method is quantitative method and also adopts a modified Delone & Mclean model to measure the success of the WMS-SELOG information system. The variables used are System Quality, Information Quality, Service Quality, Usage, User Satisfaction and net benefits of worker performance. Data collected by spread questionnaire to 159 users of WMS-SELOG. Data was preprocessing by Structural Equation Modelling (SEM) using Smart PLS 3.0 version.

In this research, to aims the user satisfaction of Warehouse Management System (WMS-Selog) information system would be explained by system quality, information quality and service quality with R-square user satisfaction and uses with score 71.6% and 66.5%. In sorted by greatest influence was quality of service (path 0.382), use (path 0.276), quality of system (path 0.171), quality of information (path 0.105). In addition, for job performance for implementation WMS-Selog, can achieve R-square score 67.1%. Based on the results of hypothesis testing we are finding two hypotheses that are not supported that system quality & Information quality does not affect to user satisfaction.

Keywords: ***DeLone and McLean IS success model, Warehouse Management System (WMS), System Quality, Information Quality, Service Quality, Job Performance***

JEL Classification: [M15,O32]

Introduction

Digitalization is result from innovation, product, platform, and new service provider with some new value, it possible used technology digital and process digital (Khin, S & Ho T. C. ,2018). General condition of national logistic are related by performance of each logistic company, especially companies working in logistics and supply chain. The implementation of Information System will make organization or companies have some value advantage competitive that would competition in digitalization era and increase the productivity and conclude utilization of Information System as a tools to help processing data for easily and saving time for up-to-date(Hestanto, 2018).

Talk about Information System inventory, every company should have good inventory management. Inventory management is an important part for efficiency supply chain management, so it will good foundation for success business. Warehouse is one of implement Information System and called Warehouse Management System (WMS). WMS was designed to enhancement every aspect of warehouse operation.

The failure to implement a WMS information system can be caused by unprepared implementers such as business managers and IT professionals in companies who underestimate the complexity of the planning, development and training needed to implement a WMS information system

(Suryantoro, 2020). Then the failure can also be caused by not involving employees as users of the WMS information system in the planning and development phase. According to (Darhayati, 2018), the causes of failure when implementing information systems can be divided into two forms, namely technical failure and non-technical failure. Technical failure can be shown through the malfunction of the information system as planned, such as the loss of database memory when processing data. Meanwhile, non-technical failures are related to human resources where there is usefulness and satisfaction with information systems which have an impact on the usefulness or not of a WMS information system.

With the increasingly strategic function of information systems because of the benefits and risks of failure that will be obtained from the implementation of this WMS information system, companies are now starting to evaluate a lot of information systems that have been implemented in their own companies to answer the uncertainty of the Actual Value of an investment. and the possibility of an increase in investment from the information system, (Pahlevi, 2013).

PT Serasi Autoraya, as main company of Serasi Logistic or SELOG has been commited to solve every logistic and support logistic problem. SELOG has been develop application warehouse Infromation System and called it WMS-Selog. WMS-Selog purpose to efficiency cost and integrated management information system.

As a company has been investment in this implementation of Information System as WMS-Selog. This study aims to evaluate and measure success the implement of Information System as a researcher continue to develop the Information System measurement model, one of several models by DeLone and McLean.

Literature Review

Digitalization

Digitalization or transformation digital is a transition of process business conventional to digital with utilization technologies (Zimmerman, 2020). Cite from Zimmerman, digitalization created by innovation technologies caused to change business process and work organization and to disrupting business process that no exist. Octavenus (2019) defined digital transformation purposed to increase work performance, and reliability company in general. Digital transformation drives new innovation and creativity and would benefition for company. Transformation digital related with automation, with automation we can control tools and machine to increase productivity, and efficiency cost. From Atmaja (2018) Office Automation is planning to improve work efficiency by involving technology for implementation.

Warehouse Management System

WMS is a subsystem of information to manage product and workflow of product in warehouse and save it in to network internet (A.K. Garside, 2017). The purposed WMS is to control management effective of saving, collecting, and information of ready stock of the product. WMS is one of application computer with database to store every transaction in warehouse for efficiency and effectivity the availability of product. Form Rangaswamy et al. (2012) WMS for control the shipping, receiving, put away, move, and picking. Several concepts of WMS are:

a) FIFO (First In First Out), The first thing to enter is the first thing to leave. The first to queue means to be served first.
b) LIFO (Last In First Out), The item that was last entered must be the first item that went out. For example, if the item is sand, the top that must be taken is automatically the top.
c) FEFO (First Expired First Out), Items that expire quickly must be released first. For example, medicine, food, drinks

Evaluation Information System

Several evaluation information systems have been carried out by previous research, but the models still have limitation of to measure the success of information system. The previous models like Theory of Reasoned Action (TRA), Theory of Planned Behavior,Technology of Acceptance Model (TAM), Task Technology Fit (TTF), End User Computing Satisfaction (EUCS), and the IS Success Model by DeLone and McLean.

a) TRA is a theory has been developed by Ajzen and Fishbein in 1980, they theory is beliefs, intention, and behavior have correlation. Importance concept of this theory is considered something that is considered important, and its intentions are determined by subjective attitudes and norms.
b) TPB is the result of development TRA, the theory of planned behavior is a theory that emphasizes the rationality of human behavior as well as the belief that the target behavior is under the conscious control of the individual (Ajzen & Fishbein, 2005).
c) TAM is one of several models has been built to analyze and understand the factor of influence the acceptance of the use of computer technology which was first proposed by Fred Davis in 1986. The main purpose of the Technology Acceptance Model (TAM) is actually to provide a basic measure of the influence of external factors on internal beliefs, attitudes and intentions.
d) Task Technology Fit (TTF) developed by Goodhue & Thompso (1995). The core of this TTF is formal structure, which is applicable of technical capabilities to task requirements.
e) End User Computer Satisfaction (EUCS) this model prioritizes to end user statisfaction, based on accuracy, content, ease of use, format, and timeliness from system. Experienced IS of user is measured to determine whether the IS used is effective and is accordance with what is desired (Pratama & Jefri Gumilar, 2012).
f) DeLone and McLean is success model IS, this model measures the system quality, information quality, service quality, use, user satisfaction, individual impact, organization impact. Variable of measurement is respresentative of success model of IS. The revisied of DeLone and McLean model in 2003 add dimension of service quality, and merge individual impact with organization impact into net benefit (Al-Debei et al, 2013).

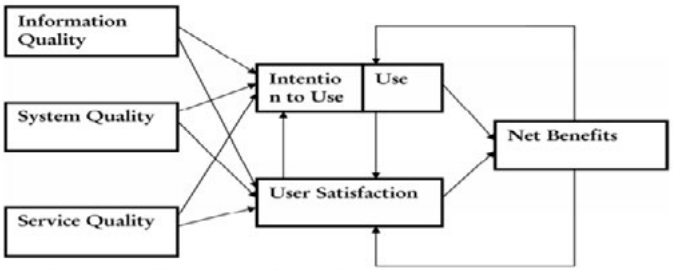

Figure 1. IS Success Model DeLone & McLean Model (2003)

g) System quality, measuring the desired characteristics of an information system, namely ease of use, availability, reliability, and adaptability. The quality of the WMS-Selog system is determined by the quality of its hardware or software components that are critical to the ability to retrieve, process, store and retrieve data and information. The system quality variable is measured by the following dimensions based on a synthesis of related paradigms regarding the functions and features of WMS-Selog, namely: 'Ease of use', 'Reliability', 'Flexibility', 'Interactivity', 'Searchability', 'Security', 'Accessibility', and 'Integration'.
h) Information quality must be accurate, complete, relevant, easy to understand and timely. information quality as "desirable characteristics of information system output". Based on the formulation of the related paradigm, the quality of information is usually measured by the following dimensions: 'Integrity', 'Timeliness', 'Usefulness', 'Understanding' and 'Customization'.
i) Service Quality, comprehensive support delivered by service providers. The WMS-Selog Service Quality variable refers to the degree of difference between the user paradigm's expectations for the service and their perception of service performance and to evaluate service quality using five dimensions (or constructs): 'Tangibles', 'Reliability', 'Responsiveness', 'Assurance' and 'Empathy'. This construct evaluates expectations for agreed services and perceptions of previously rendered services
j) Intention to use and use Measures everything from visits to a Web site, to navigation within the site, searching for information and executing transactions, System Use as the degree and manner in which employees and customers utilize the capabilities of information systems, the use of individual-level systems as the work of individual users of one or more system features to perform tasks.

k) User satisfaction Measuring customer/user opinions on the quality of systems, information and services related to their experiences with information systems. It refers to the feeling of pleasure or displeasure that results from the aggregation of all the benefits one is expected to receive from interaction with IS i.e., WMS-Selog in this case

l) Job performance is the most important measure of success because it is the positive and negative impact of information systems on individuals

Related Works

Several researchers have been measuring the success model information system. Debei et al (2013), measuring web portal success, they observed the model DeLone and McLean for update some revised based on their case affect their model. And M. Miralam et al (2017), research about impact of WMS to their warehouse of sparepart industry, and the result the WMS give the solution of efficiency and effectiveness of warehouse performance.

Methods

Research Framework

This research framework was built the success model of information system by DeLone and McLean model, this model has been implemented by several researcher before. This work, implement DeLone and McLean to measure the success of WMS-Selog.

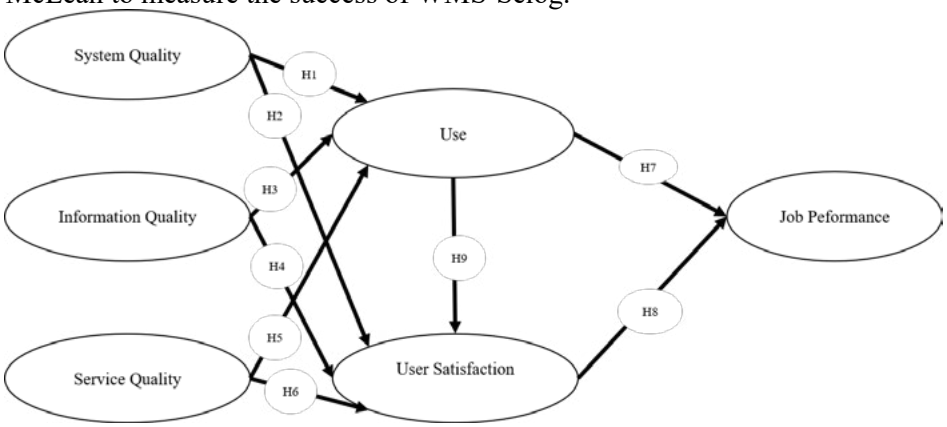

Figure 2. IS Research Framework

Based on figure 1. Research framework five variable influence the success of Information System was the system quality, information quality, service quality. User satisfaction and use it will be impact to the job performance in this study. Based on that framework model describe previously, and the hypothesis in this study were as follows:

H1. System Quality positively affect Use
H2. System Quality positively affect User Satisfaction
H3. Information Quality positively affect Use
H4. Information Quality positively affect User satisfaction
H5. Service Quality positively affect Use
H6. Service Quality positively affect User Satisfaction
H7. Use positively affect Job Performance
H8. User Satisfaction positively affect Job Performance
H9. Use positively affet User Satisfaction

Type of Research

This Research was conclusive to analyze and measure the influence of system quality, information quality, service quality, use, user satisfaction for WMS-Selog system and its effect on job performance.

Variable Optimization

In this study use three variables operational are independent, dependent,intervent. Cite from Sugiyono (2018: 57), independent variables are influence or affect change or add new dependent variables. Independent variables are system quality, information quality, service quality. Dependent variables are a result from independent variables (Sugiyono, 2018). In this study dependent variables

are job performance. Variables intervent is a variable that affects the independent variable and the dependent variable. The dependent variable will be an indirect variable that cannot be observed and measured. This variable is an intermediary variable between the independent variable and the dependent variable, so that the independent variable does not directly affect the change or emergence of the dependent variable (Sugiyono, 2018). The intervening variables in this study are usage and user satisfaction.

Data Analysis

Sample data in this study is 158 responden have been used WMS-Selog application. Further, structural equation model or SEM was a tool for analyze multivariate data. By using this analysis technique, the researcher can analyze the relationship between several variables at the same time Indrawati, P. (2015: 186). The analysis was carried out using SEM using software smart PLS 3.0 version. Analysis using PLS-SEM would produce two model stages:

1. Outer Model
   Outer model focused on validity and reability indicator that has been used in this research (Santosa, 2018). This model explained the purposed is decrease the error rate. There two assess measurement model namely: Convergent validty and discriminant validity.
2. Inner Model
   Inner model or structural test to estimate between variabels latent and construct. In this study, the inner model was tested by showing the value of R^2 or confident of the determinant in the endogenous latent construct and the predictive relevance with the Gof value.

Results

Result Descriptive Analysis

To recognize result of questionnaire in this study, analysis data used value analysis. From this answer of questionnaire, the assessment of criteria question based on percentage was compiled.

Analysis Structural Equation Model

1. Measurement Model Test (Outer Model)
   The test result of convergent validity generated by Average Variance Extracted and Outer Loading shown on Table 1. And Table 2.

Table 1. Result of AVE test

Variabel	AVE	Target Indicator	Status
Quality System	0.535	≥ 0.5	Valid
Information Quality	0.557	≥ 0.5	Valid
Quality Service	0.587	≥ 0.5	Valid
Use	0.696	≥ 0.5	Valid
User Satisfaction	0.624	≥ 0.5	Valid
Job Perfromance	0.552	≥ 0.5	Valid

Table 2. Result of Testing Outer and Cross Landing

	System Quality	Information Quality	Service Quality	Use	User Satisfaction	Job Performance
KS1	0.712	0.49	0.576	0.558	0.519	0.59
KS2	0.737	0.496	0.552	0.502	0.538	0.603
KS3	0.724	0.479	0.562	0.511	0.594	0.594
KS4	0.72	0.54	0.548	0.529	0.488	0.669
KS5	0.744	0.538	0.613	0.586	0.609	0.577
KS6	0.739	0.569	0.584	0.579	0.573	0.657
KS7	0.749	0.596	0.503	0.59	0.564	0.586

KS8	0.723	0.608	0.513	0.502	0.457	0.514
KI1	0.534	0.722	0.409	0.497	0.432	0.519
KI2	0.536	0.711	0.415	0.418	0.357	0.463
KI3	0.551	0.777	0.482	0.467	0.526	0.479
KI4	0.533	0.79	0.488	0.495	0.552	0.605
KI5	0.5	0.758	0.459	0.459	0.485	0.451
KI6	0.572	0.761	0.578	0.565	0.594	0.537
KI7	0.51	0.738	0.488	0.485	0.43	0.475
KI8	0.597	0.716	0.576	0.536	0.561	0.574
KI9	0.6	0.738	0.601	0.555	0.536	0.597
KL1	0.578	0.5	0.729	0.568	0.587	0.597
KL10	0.593	0.542	0.776	0.643	0.594	0.621
KL11	0.583	0.487	0.779	0.624	0.67	0.608
KL12	0.584	0.545	0.773	0.616	0.676	0.599
KL13	0.568	0.532	0.765	0.615	0.628	0.623
KL2	0.541	0.454	0.707	0.494	0.492	0.62
KL3	0.57	0.513	0.745	0.565	0.568	0.592
KL4	0.598	0.478	0.757	0.533	0.563	0.591
KL5	0.597	0.566	0.792	0.616	0.634	0.644
KL6	0.584	0.481	0.771	0.565	0.617	0.592
KL7	0.656	0.557	0.787	0.643	0.636	0.612
KL8	0.549	0.551	0.774	0.565	0.598	0.631
KL9	0.582	0.524	0.797	0.605	0.636	0.66
PE1	0.668	0.533	0.66	0.817	0.588	0.65
PE2	0.582	0.541	0.642	0.81	0.632	0.625
PE3	0.621	0.606	0.631	0.875	0.703	0.684
KP1	0.635	0.552	0.644	0.659	0.832	0.609
KP2	0.602	0.568	0.607	0.57	0.772	0.604
KP3	0.62	0.575	0.623	0.637	0.83	0.629
KP4	0.57	0.52	0.619	0.567	0.783	0.552
KP5	0.556	0.498	0.636	0.596	0.8	0.577
KP6	0.599	0.525	0.655	0.676	0.778	0.612
	System Quality	**Information Quality**	**Service Quality**	**Use**	**User Satisfaction**	**Job Performance**
KP7	0.562	0.532	0.623	0.634	0.749	0.585
KP8	0.565	0.496	0.625	0.511	0.773	0.601
MK1	0.594	0.539	0.672	0.763	0.651	0.715
MK2	0.601	0.594	0.559	0.543	0.554	0.72
MK3	0.626	0.456	0.665	0.512	0.571	0.745
MK4	0.617	0.557	0.568	0.593	0.495	0.763
MK5	0.619	0.504	0.564	0.569	0.61	0.782
MK6	0.601	0.505	0.5	0.47	0.423	0.7
MK7	0.63	0.538	0.651	0.617	0.625	0.807

MK8	0.63	0.528	0.516	0.521	0.436	0.722
MK9	0.572	0.493	0.616	0.57	0.612	0.728

Convergent validity test generated by AVE value of above 0.5 for all variables and generated for Cross Loading above 0.7. The test result show correlation value between own latent variables and other latent variables has greater. This show that all variables were valid to hypothesis testing. Next for outer model test value of measurement variable latent based on two criteria, Cronbach's Alpha and Composite Reliability.

Table 3. Result Reliability Test

No	Variable	Cronbach's Alpha	Status	Composite Reliability
1	Quality System	0.876	Reliable	0.902
2	Information Qualitu	0.901	Reliable	0.919
3	Quality Service	0.941	Reliable	0.949
4	Use	0.781	Reliable	0.873
5	User Satisfaction	0.914	Reliable	0.93
6	Job Performance	0.899	Reliable	0.917

Based on Table 3. Value of Cornbach Alpha and Composite Reliability are above 0.7, therefore every structure is reliable. Further after this model that can continue to hyphotheis test with inner model test.

2. Measurement Hyphothesis model (Inner Model)

By using smart-PLS 3.0 software with bootstrapping menu, result of path structural model was conducted. Path Coefficient and R-Square value as shown the following diagram

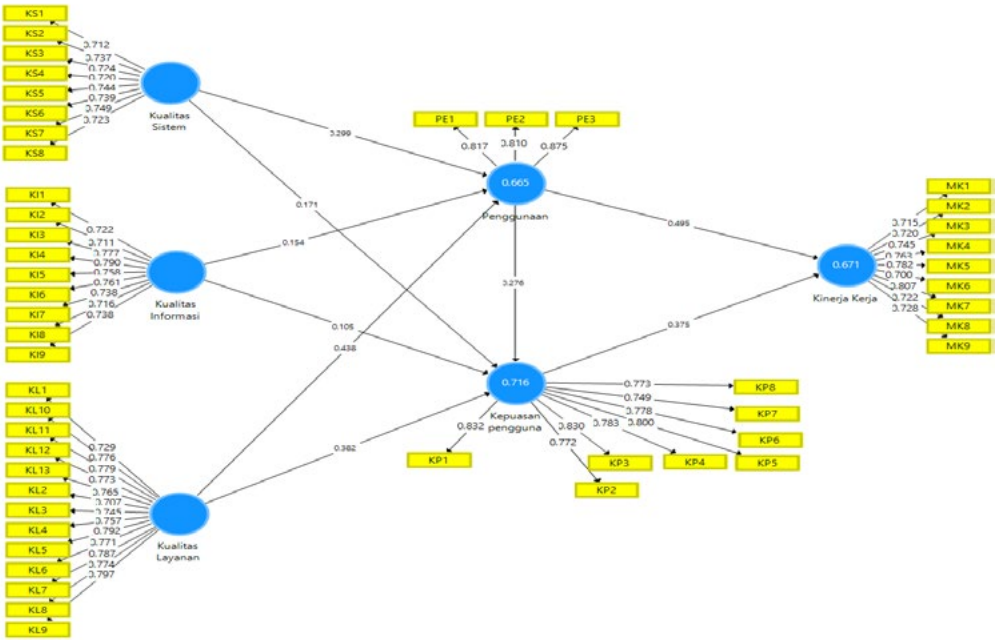

Figure 3. Path Coefficient

Table 4. Result of R-Square

Variable	R-Square
User Satisfaction	0.716
Use	0.671
Job Performance	0.665

Result of R-square value of user satisfaction 0.716, use 0.671, and job performance 0.665, which WMS-Selog user satisfaction in this model can be explained by system quality, information quality, and service quality with result score 71.60%. And job performance implementation of WMS-Selog in this model explained by user satisfaction of 66.50%.

Research Hyphothesis Test

Hyphothesis testing research was completed by looking t-statistic released by smartPLS3 software. The following are the results of the bootstrapping test which are presented in the Table 5. below.

Table 5. T-Statistic Result

Statistic Hypothesis	Relationship	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Evidence	Effect
H1	System Quality → Use	0.299	0.298	0.091	3.298	0.001	Accepted	Significant
H2	System Quality → User Satisfaction	0.171	0.181	0.095	1.806	**0.072**	**Rejected**	**Not Signi**

								fican t
H3	Information Quality → Use	0.154	0.156	0.077	1.994	0.047	Accepted	Signi fican t
H4	Information Quality → User Satisfaction	0.105	0.094	0.095	1.108	**0.268**	**Rejected**	**Not Signi fican t**
H5	Service Quality → User Satisfaction	0.382	0.386	0.109	3.494	0.001	Accepted	Signi fican t
H6	Service Quality → Use	0.438	0.439	0.079	5.577	0	Accepted	Signi fican t
H7	Use → Job Perfromance	0.495	0.488	0.066	7.474	0	Accepted	Signi fican t
H8	User Satisfaction → Job Performance	0.375	0.382	0.065	5.744	0	Accepted	Signi fican t
H9	Use → User Satisfaction	0.276	0.271	0.079	3.478	0.001	Accepted	Signi fican t

based on the significance value between constructs, t-statistics and p-values. The rule of thumb used in this study is t-statistic > 1.96 with a p-value level of 0.05 (5%). The value of the system quality has a positive effect on user satisfaction but is not significant. Meanwhile, the quality of the system has a positive effect on the use and is significant. Furthermore, the quality of information has a positive effect on user satisfaction but is not significant. Meanwhile, the quality of information has a positive and significant effect on usage. For service quality has a positive and significant effect on user satisfaction. Meanwhile, service quality has a positive and significant effect on usage. For use, it has a positive and significant effect on user satisfaction. While for the use of positive and significant effect on work performance. Lastly, user satisfaction has a positive and significant effect on work performance.

Discussion

Based on Table 5. variable statistical have nine hyphothesis and relationship between independent variables and dependent variables has positive influence and significant with dependent variables.

Hypothesis one value T-statistic influence between variable system quality to use is 3.298 more then 1.96 with level significant 5% and has p-value 0.001 less than 0.05. it means hypothesis test one h0 rejected and h1 accepted. It proven variable system quality has positive influence on variable use. System quality has strong relationship with variable use. Good system quality would be good for use (Devaraj et al., 2002)

Hypothesis two value T-statistic influence between variable system quality to user satisfaction is 1.806 less than 1.96 with level 5% and has p-value 0.072 more then 0.05, which means hypothesis test two is h0 not rejected. It proven by emphiris positive influence but not significant. Another previous research explained system quality does not influence significant to user satisfaction (Halawi et al., 2007).

Hypothesis three shown value T-statistic influence between variables information quality to use is 1.994 and more than 1.96 with level 5% significant and it has p-values 0.047 less than 0.05. it means result hypothesis three h0 rejected and h1 accepted. Information quality has positive influence to use. Good information quality would be good use WMS (Al-Debei et al., 2013).

Hypothesis four shown value T-statistic influence between variables information quality to user satisfaction is 1.108 and less than 1.96 with lavel significant 5%, and it has p-values 0.268 more than 0.05. which means information quality proven influence user satisfaction but not significant, so h0

accepted and h1 rejected. Another research proven information quality does not influence significant with user satisfaction (Chiu et al., 2007).

Hypothesis five shown value T-statistic influence between service quality to user satisfactionis is 3.494 more than 1.96 with level 5% significant and it has p-value 0.001 less than 0.05. it means hypothesis test five h0 rejected and h1 accepted. Service quality proven positive influence and significant to user satisfaction. This result shown according to previous research (Al-Debei et al., 2013).

Hypothesis six shown value T-statistic influence between variable service quality to use is 5.557 and more than 1.96 with level 5% significant and it has p-value 0 less than 0.005. it means hypothesis test six is h0 rejected and h1 accepted. Its proven service quality has positive influence to use variable. Better service quality would be good for use WMS-Selog (Al-Debei et al., 2013).

Hypothesis seven value T-statistic influence between variable use to job performance is 7.474 more bigger than minimum value 1.96 with level significant 5% and has p-value 0 less than 0.05. it means result hypothesis test eight h0 rejected and h1 accepted. It proven variable use has positive influence and significant to job performance (Al-Debei et al., 2013).

Hypothesis eight shown value T-statistic influence between variable user satisfaction to job performance is, 5.744 and more than minimal value 1.96 with level 5% significant and it has P-value less than 0.05. which mean hypothesis test eight h0 rejected and h1 accepted. It proven user satisfaction positive influence to job performance (Al-Debei et al., 2013).

Hypothesis nine value T-statistic influence between variable use to user satisfaction is 3.478 more then 1.96 with level 5% and has p-value 0.001 less than 0.05. which mean hypothesis test nine is h0 rejected and h1 accepted. It proven variable use has positive influence and significant to user satisfaction. Value of sample is positive, so it declared variable use has strong relationship with user satisfaction (Al-Debei et al., 2013).

Conclusion

Based on result analysis descriptive shown evaluation of respondent as user of WMS-Selog on variables system quality, information quality, use, job performance concluded great category with interval range 62.50% - 81.25%. And variables service quality and user satisfaction concluded very good category with range 81.25% - 100%.

Hypothesis test that have been work shown system quality, information quality, service quality, proven positively influence and significant to WMS-Selog. System quality and information quality have positively influence but not significant to user satisfaction WMS-Selog (caused test T-statistic < 1.96 and p-value >0.05), meanwhile for system quality has positively influence and significant to user satisfaction WMS-Selog. User satisfaction and use proven have positively influence and significant to job performance. Information quality and system quality do not have a positive effect on user satisfaction, this is because the use of a system that is mandatory used by users, so the quality of information is not a determining factor and a special attraction for users. This has an impact on the psychological effect of users, they are more focused on getting work done than on the available information.

Research model used Delone and McLean approach that have been modified and had r-square 0.716 for user satisfaction variable explained system quality, information quality, service quality achieve 71.6%. Next, for value r-square 0.665 on variables which means the use WMS-Selog in this model explained system quality, information quality, and service quality reaching 66.5%. Therefore, this model used for prediction of user satisfaction and use on WMS-Selog from three aspect, namely system quality, information quality, service quality. Furthermore, variable job performance has value r-square 0.671 which means job performance of implementation WMS-Selog good enough for individual performance and organization performance explained from user satisfaction and use achieve 67.1%.

Arrangement variables have influence the user satisfaction WMS-Selog from the biggest is service quality (path 0.382), system quality (path 0.171), and information quality (path 0.105). And influence to use WMS-Selog from the biggest is quality service (path 0.438), system quality (path 0.299), and service quality (path 0.154).

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THE IMPACT OF DIGITAL CAPABILITIES ON SUSTAINABLE DIGITAL TRANSFORMATION OF HOSPITALITY INDUSTRY IN WEST JAVA

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Abstract
This research is motivated by the disruption of digital technology that has impacted the hospitality industry. The presence of digital reservation in the hospitality industry is transforming digital platforms in the hospitality industry. Hotel industry players must be able to adapt and transform by utilizing Digital Market Capabilities, Digital Leadership Capabilities, Digital Technology Capabilities, and Digital Innovation Capabilities. This research uses quantitative, descriptive, and explanatory survey with hospitality industry analysis unit in West Java. The observation unit in this study is the General Manager of West Java Hotel. This study used purposive sample techniques on 210 factually verified and administrative hotels by PRHI. The data analysis method used in this study was SEM-PLS. Based on the research conducted, the influence of Digital Capabilites on Sustainable Digital Transformation simultaneously is 0.809 or in percent by 80.9% while the remaining 19.1% is influenced by other factors. Digital Technology Capabilities is the variable with the highest influence on Sustainable Digital Transformation and is a suggestion for companies to focus more on developing digital technology.
Keywords: Digital Market Capabilities, Digital Leadership Capabilities, Digital, Technology Capabilities, Digital Innovation Capabilities, Sustainable Digital Transformation

Sari Pati
Penelitian ini dilatarbelakang oleh terganggunya teknologi digital yang berdampak pada industri perhotelan. Kehadiran reservasi digital di industri perhotelan mengubah platform digital di industri perhotelan. Pelaku industri hotel harus mampu beradaptasi dan bertransformasi dengan memanfaatkan Kemampuan Pasar Digital, Kemampuan Kepemimpinan Digital, Kemampuan Teknologi Digital, dan Kemampuan Inovasi Digital. Penelitian ini menggunakan survei kuantitatif, deskriptif, dan penjelasan dengan unit analisis industri perhotelan di Jawa Barat. Unit observasi dalam penelitian ini adalah General Manager Hotel Jawa Barat. Penelitian ini menggunakan teknik sampel purposive pada 210 hotel yang diverifikasi secara faktual dan administratif oleh PRHI. Metode analisis data yang digunakan dalam penelitian ini adalah SEM-PLS. Berdasarkan penelitian yang dilakukan, pengaruh Kemampuan Digital terhadap Transformasi Digital Berkelanjutan secara bersamaan adalah 0,809 atau persen sebesar 80,9% sedangkan 19,1% sisanya dipengaruhi oleh faktor lain. *Digital Technology Capabilities* menjadi variabel dengan pengaruh tertinggi terhadap *Sustainable Digital Transformation* dan menjadi saran untuk perusahaan agar lebih fokus dalam mengembangkan teknologi digital.
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Introduction

Tourism is the most important industrial sector in a country to improve the country's economy, according to the Ministry of Tourism (2016), the contribution of the tourism sector to the national Gross Domestic Product (GDP) in 2014 has reached 9% or Rp 946.09 trillion. Meanwhile, foreign exchange from the tourism sector in 2014 has reached Rp 120 trillion and contributed to employment opportunities of 11 million people (Anggraini, 2017).

Minister of Tourism Arief Yahya (2019) said that the tourism industry is one of the industries with the largest income contributor in Indonesia after petroleum, gas, coal, and palm oil. The tourism sector will also be targeted to be the "core economy" and the largest foreign exchange contributor in Indonesia for the next five years. This is also supported by President Joko Widodo's statement in a "limited meeting" that announced that it will make the tourism sector as the largest foreign exchange contributor sector, because he thinks the tourism sector has unlimited resources and will not run out so it is expected to be able to bear the function of the largest foreign exchange contributor above other sectors. In Indonesia one of the provinces that has potential with many tourist attractions is West Java

Province. According to data from the Central Bureau of Statistics (BPS), that West Java Province is one of the largest contributors of national GDP after Jakarta and East Java Provinces. West Java GDP's share of national GDP reached 13.30% in the third quarter of 2019, or Rp 307.37 Trillion (Constant Price). Of these, the tourism sector contributed 4%, foreign exchange generated around Rp 155 trillion and jobs generated as much as 11.3 million, OJK Board of Commissioners Member Ilya Avianty said in an out look at the economy in 2020 (G Komalasari, 2017).

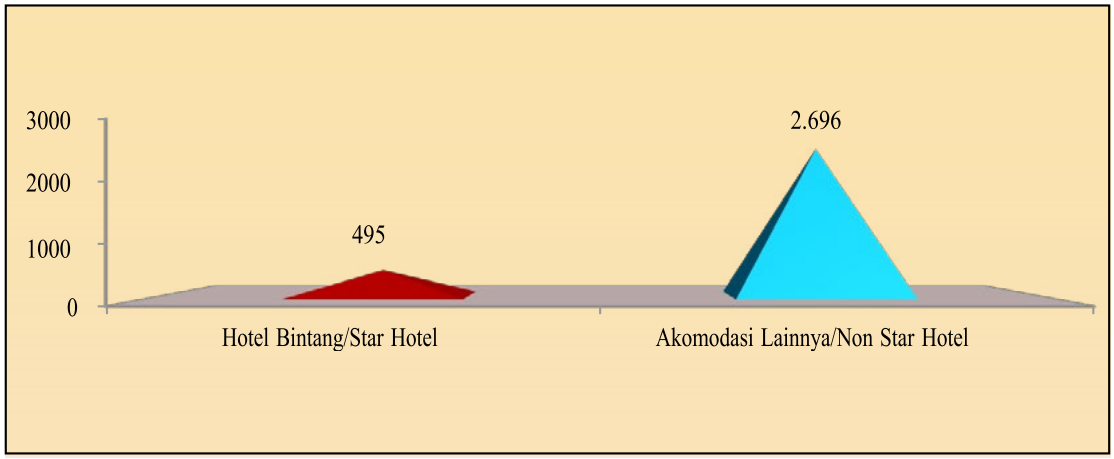
West Java is one of the provinces in Indonesia that offers a lot of tourist attractions, both natural attractions, culinary places, malls, and factory outlets. This makes West Java Province become very popular with domestic or foreign tourists. Based on data from the Central Bureau of Statistics (BPS) in 2019, West Java Province ranks second in the Number of Travel Tourists Nusantara with a total of 49 Million People. West Java province with a variety of natural wealth and resources is very potential to become the best tourist destination in Indonesia. The reason is because in West Java there are Special Economic Zones Sukabumi (Cikidang) and Pangandaran And there are still five others including in West Bandung. (Lohmann, et al., 2017).

Table 1. Number of Travel Tourists Nusantara

Provinsi	Jumlah Perjalanan Wisatawan Nusantara (Orang)		
	2017	2018	2019
INDONESIA	270 822 003	303 403 888	282 925 854
JAWA TIMUR	43 689 273	53 244 287	52 081 723
JAWA BARAT	43 779 162	53 203 387	49 247 753
JAWA TENGAH	41 182 591	43 110 598	39 211 023
DKI JAKARTA	24 840 040	24 967 080	21 683 578
BANTEN	9 551 703	13 275 125	11 390 512

Source: Central Bureau of Statistics of West Java Province (2020)

Along with the development of tourism attractions in West Java, it is what makes West Java more famous, which will eventually have an impact on the tourism and hospitality industry becomes increasingly in demand. The Central Bureau of Statistics (BPS) in 2019 recorded a consumption growth of restaurants and hotels of 5.87%. Higher than the growth in household consumption which stood at 4.93%. BPS shows that millennials who are the dominant consumers in Indonesia today (up to 46%) more royal spend money for lifestyle and experience needs such as: eating out of the house, watching movies, recreation, body care, face, hair to vacation in the hotel to unwind. The relationship between tourism and the hospitality industry is closely related. It can be said that the hospitality industry is one of the foundations supporting the development of the tourism sector (Herman Budiman, 2017).



Source: Central Bureau of Statistics of West Java Province (2020)

Figure 1. Number of Accommodation Businesses by Classification

The number of accommodation providers in West Java in 2019 was recorded as 3,191 businesses with the number of available rooms reaching 95,226 rooms. Among the accommodation businesses, 495 businesses or 15.51 percent are hotels that have been classified as star hotels with a total of 48,755 rooms. Meanwhile, for other accommodation businesses, which amounted to 2,696 businesses (84.49 percent) with 46,471 rooms (48.80 percent), this figure includes nonstar hotels and other short-term accommodations. This makes competition between Hotels and Other Accommodations increasing in today's Digitalization Age (Nunik Fadjrina, 2020).

Digital disruption has spread to various sectors, including the tourism industry. Moreover, nowadays more and more millennials have made travel as a lifestyle. According to Hariyadi Sukamdani, chairman of the Indonesian Hotel and Restaurant Association (2016) in the Online forum Bisnis.com mentioned that the hospitality industry in west Java, especially in the city of Bandung has led to unhealthy competition with the phenomenon of tariff wars. Coupled with the disruption of digital technology has impacted the hospitality industry sector. The emergence of travel and accommodation applications such as AirBnB, Foursquare, Traveloka.com, Tickets. com and others may have an impact on the hospitality sector if not immediately anticipated. Travel applications based on android usually provide information on hotels or lodging at low prices.

Based on bps report of West Java Growth in the hospitality sector in West Java Province in the third quarter of 2018 was lower when compared to growth in the third quarter of 2017. In the third quarter, the growth of West Java hospitality industry was only 4.31%, while in the same quarter in 2017, the growth was worth 5.58%. According to the https://nasional.sindonews.com/berita/1260138/16/airbnb-dan-bisnis-perhotelan page accessed on June 29, 2021, one of the factors causing the decline is the increasingly intense competition in the hospitality business after the emergence of small hotels and Airbnb. Prices are getting tighter, hoteliers can not get too high profit margins.

According to Sherly Gozzali, Monika Kristanti in the Journal of Hospitality and Service Management Vol 1, No. 2 (2017) there are seven factors that encourage people to make hotel reservations online, namely popularity and technology factors, reliability, convenience, speed, information, price, and reward. Popularity and technology factors are the factors that contribute the most.

Economist from the Institute for Development of Economics and Finance, Bhima Yudhistira argues, large hoteliers should adjust to new competitors, especially those already exposed to technologies such as hotels on the Airbnb platform. With the competition, there will be many players who fall if they are unable to keep up with the development of technology. The rise of Airbnb did change the digital platform in hotel bookings and promotions. This platform comes with an online business model that connects homeowners, inns, or hotels with consumers. Airbnb certainly doesn't own its own property. The company becomes an intermediary for prospective tenants with residential owners. Airbnb's success in running its business is influenced by the sharing economy model. While it lacks physical assets, integration between property owners and customers can occur at the touch of a finger in an online application.

Based on disruptive innovation theory, Clayton Christensen et al. 2015, explains why large companies succeed or fail to respond to disruptive innovation, and helps managers to measure the strength of the organization's current (capabilities) as well as its weaknesses in answering disruptive innovations. There are 4 capabilities factors to be able to respond to distrub innovation. Digital Market Capabilities, Digital Leadership Capabilities, Digital Technology Capabilities, and Digital Innovation Capabilities.

Literature review that has been done author used in the chapter "Introduction" to explain the difference of the manuscript with other papers, that it is innovative, it are used in the chapter "Research Method" to describe the step of research and used in the chapter "Results and Discussion" to support the analysis of the results. If the manuscript was written really have high originality, which proposed a new method, the additional chapter after the "Introduction" chapter and before the " Method" chapter can be added to explain briefly the theory and/or the proposed method.

Literature Review

Strategy Management

Strategy management is a way of taking action to produce a strategy formulation, and impede the strategy from what is planned to achieve the company's goals (Pearce & Robinson, 2011). Strategic management is a group of managerial decisions and actions that determine the long-term performance of the organization. Strategic management is important because it can make a difference in how well an organization performs and relates to the fact that organizations of all types and sizes face an constantly changing situation (Robbins, 2007:218). Strategic management can be defined as art and knowledge in formulating, implementing, and evaluating cross-functional decisions that enable an organization to achieve its goals (David, 2011:5)

Digital Business

E-Business or Digital Business is to integrate in the production department area, raw material provision process, self-service sales employee area (with human resource information system implementation), and Customer Relationship Management (CRM) as well as operational support areas such as finance and human resources but with orientation to customers (Widhianto, 2002:24). Digital business refers to the use of internet information technology (IT) in each of its business and industrial value chains (Krell & Gale, 2005). Business models can be categorized as digital if the use of digital technology triggers fundamental differences in the dimensions of their value, simply put it can be concluded that digital business or E-Business in the form of utilization of digital media and technology to improve the competitiveness of companies / organizations. Remane et al. (2017). Digital business is a new or modern strategy created to make a change within the company. In digital transformation there are several stages, including digitazion, digitalization, and digital transformation Veit et al. (2014).

Digital Transformation

Digital transformation can be understood as a change in digital technology that changes or affects in all aspects of human life Kaplan et al. (2004). Digital transformation as a quest to understand how disruptive technology affects the digital customer experience (Brian Solis, 2015). Digital Transformation (TD) is the use of technology to radically improve performance or reach companies. Executives in all industries are using digital advancements such as mobility analytics, social media, and AI to transform customer relationships, internal processes, and value propositions Westerman et al. (2011).

Digital Market Capabilities

Digital market capability is the company's ability to understand the market in order to be able to bring profit to the company (Fauzi & Widiyanto, 2015). In the context of market capabilities, (Valanto, 2017) states that digital market capabilities are a combination of understanding customer needs and maintaining good relationships with customers, it is very important to be able to gather and process customer knowledge both existing and new customers. In line with the research of Johny Natu Prihanto (2018), Ziad Alrawadieh et al (2017) support the idea that there is a link between market capabilities and sustainable digital transformation. They assume that the ability of the digital market is able to make a company sustainable and sustainable. Ziad Alrawadieh et al (2017) stated that the company's strategy is an important area of focus for anyone who wants to make changes towards more sustainable corporate behavior. Research conducted by Pablos and Lytras with the journal, "Knowledge Management, Innovation and Big Data: Implications for Sustainability, Policy Making and Competitiveness", states that the capacity of market capabilities to support scientific studies in helping social problems.

Digital Leadership Capabilities

Digital Leadership is the strategic use of the company's digital assets to achieve business goals (Mckinsey, 2019). Emphasized that it is not just what the company has invested in, but how to lead the changes that make these companies what he calls "digital masters". In the context of leadership, digital business strategy is very important. A leader must be highly committed to transforming technology towards transformation. Executives within digital companies are driving the transformation through strong top down leadership: setting direction, building momentum, and ensuring that companies will follow through. Westerman et al. (2014). J. Johny Natu Prihanto (2018) proves that the digital leadership capabilities hypothesis has a significantly positive relationship to sustainable digital transformation. J. Johny Natu Prihanto explains top down leadership means strong governance and coordination. Leadership capabilities are essential to achieving digital transformation where leaders are able to turn digital investment into digital excellence. Based on research conducted by Novita Intan (2017), Novita

understands that digital leadership capabilities are related to sustainable digital transformation. A leader must have a high commitment to transforming technology towards transformation. Driving transformation through strong leadership top down: setting direction, building momentum, and ensuring that companies will withstand technological sophistication.

Digital Technology Capabilities

Technology Capabilities is information and technical, managerial and institutional skills that enable productive companies to utilize equipment and technology efficiently using digital. Although there are several constants, such capabilities are in the general and enterprise-specific sectors, a form of institutional knowledge consisting of the combined skills that its members gather over time (Galbraith, 2019:31). J. Johny Natu Prihanto (2018) proves that the digital technology capabilities hypothesis has a significant positive relationship to sustainable digital transformation. One of the main driving forces of digital business is IT capabilities in organizations. Recognize the role of technology in achieving appropriate digital transformation and is motivated by a call to competitive advantage. Based on research conducted by Nadine Drexler et al (2018), they agree with the idea that as digital transformation develops, technology capabilities become an absolute requirement to be able to transform and make companies able to sustain disturb technology. Nadine Drexler et al (2018) explain that technology becomes a center of activity for themselves. Most activities rely directly or indirectly on technology, making IT more important to hotel operations and guest experience than ever before.

Digital Innovation Capabilities

Innovation Capabilities is a framework that aims to describe actions that can be taken to improve the success of innovation activities and efforts (Lawson & Samson, 2001). Whereas according to (Assink, 2006) Innovation Capabilities is an internal driving energy to generate and explore radical new ideas and concepts, to experiment with solutions for patterns of opportunity detected in the white space of the market and to develop innovations that can be marketed and effective, utilizing internal and external resources and competencies. J. Johny Natu Prihanto (2018) proves that the digital innovation capabilities hypothesis has a significant positive relationship to sustainable digital transformation. Digital businesses can innovate quickly and increase innovation to bring valuable digital products and services to customers. Based on previous research nina wittkamp et al (2020), they assume that digital innovation refers to the application of digital technology to existing business problems. Ideas such as digital transformation and digitalization are closely related to the concept of innovation and digital sustain.

Sustainable Digital Transformation

According to the Cybercom Group (Digital Consultants) Sustainable Digital is a means by which digitization, as an important part of the fourth industrial revolution, can deliver global sustainability goals. This differs from a traditional sustainability perspective, where the focus is on philanthropy and the negative impact of organizations over their life cycle. Whereas according to (Mckinsey, 2019) Sustainable Digital is an approach that leverages one of the most powerful forces for social change, namely digitalization, to deliver what we need and want sustainably. Digitalization refers to a particular technology and its implications and consequences. Sustainable Digital is how technology is used to deliver sustainability. Sustainable Digital Transformation is a shift that fundamentally changes human interaction and feedback and the environment Walker et al. (2004). J. Johny Natu Prihanto (2018) states that digital transformation can affect marketing communication strategies that have an impact on sales increasing or decreasing. Digital transformation involves resources at its disposal including leveraging existing digital technologies to generate externals from organizations to provide new experiences. In research J. Johny Natu Prihanto (2018) showed digital market capabilities, digital leadership capabilities, digital technology capabilities, and digital innovation capabilities together or simultaneously have a significant positive effect on sustainable digital transformation. Research conducted wahil El hilali, Abdellah El Manouar & Mohammed Abdou Janati Idrissi; "Digital Transfomation for Sustainability: A Qualitative Analysis", this study is a qualitative and exploratory study of the relationship between digital transformation and sustainability. The findings show that three companies through 4 dimensions of digital transformation: customers, data, innovation and competition, this has increased profits, as well as to reduce the negative externalities of the environment.

Methodology

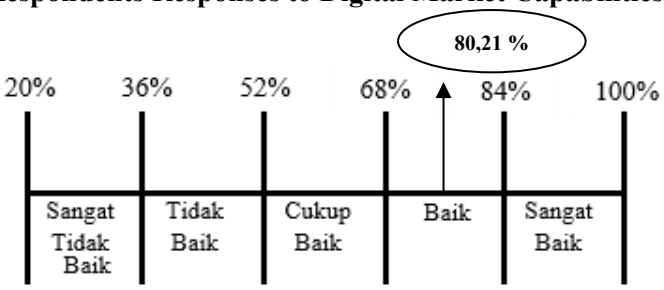
This research uses quantitative research. The research method uses descriptive survey and explanatory survey method with the analysis unit of hospitality companies in West Java PHRI members using purposive sample techniques against 210 hotels. Respondents in this study were general managers or hotel owners in West Java. General managers are chosen because they have the ability to evaluate innovation initiatives in improving the company's performance. The type of data collected is quantitative, and the data obtained is primary data, i.e. data obtained directly from the respondents determined from the beginning. Data collection is done by disseminating questionnaires directly to the general managers or hotel owners. The distribution of questionnaires was conducted between January and June 2021. In this study the indicators in the questionnaire used were based on previous studies indexed scopus. To avoid error control tendency, i.e. respondents who tend to choose answers that are neutral so it is difficult to analyze, used Likert scale with five rating numbers. Numbers 1 through 5 indicate a degree of disagreement to the level of strongly agreeing to the question of the object being studied, where the greater the weight or number chosen indicates the more agreed with the related statement. (Dawes, 2008). This research analysis uses multivariate analysis, namely Structural Equation Model (SEM) analysis with Partial Least Square (PLS) approach. The analysis process is done using a two-step approach (Chin, 2010), namely the evaluation of measurement models and evaluation of structural models. According to Ghozali (2008), Partial Least Square (PLS) is a powerful analytical method because it is not based on many assumptions and can be applied to ordinal data scales, and can be run for a number of samples that do not have to be large, recommended minimum sample of 30 sample numbers (Chin, 1998 – inside Ghozali, 2012). PLS in addition can be used to confirm the theory can also be used to explain the existence or absence of relationships between latent variables. Sem special feature using PLS in the form of weighting scheme.
Tables and Figures are presented center, as shown below and cited in the manuscript.

Results And Discussion

Descriptive Analysis

Descriptive Analysis aims to determine the picture of 210 respondents to the variables Digital Market Capabilities, Digital Leadership Capabilities, Digital Technology Capabilities, Digital Innovation Capabilities, and Sustainable Digital Transformation consisting of 16 statements.

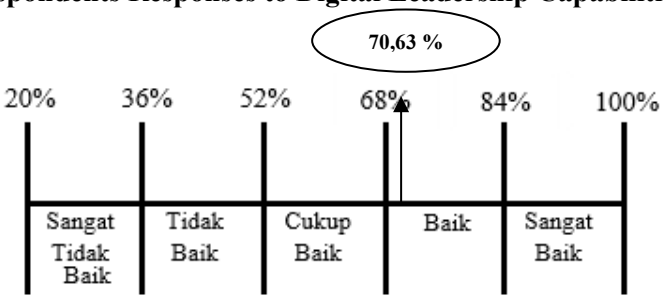
Respondents Responses to Digital Market Capabilities



Source: Data Processing Results (2021)

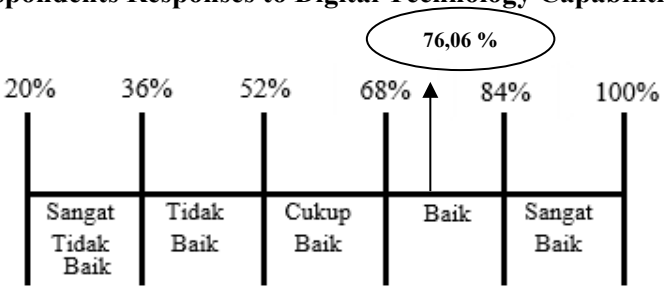
Figure 2. Digital Market Capabilities Variable Continuum Line

Respondents Responses to Digital Leadership Capabilities



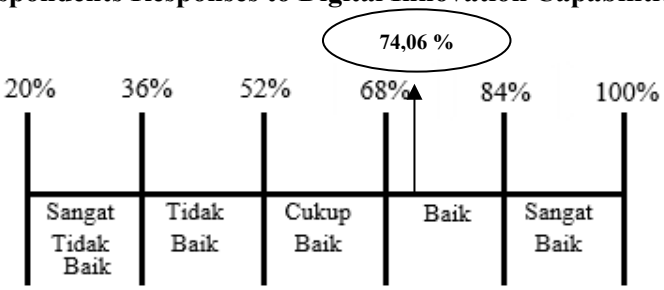
Source: Data Processing Results (2021)
Figure 3. Digital Leadership Capabilities Variable Continuum Line

Respondents Responses to Digital Technology Capabilities



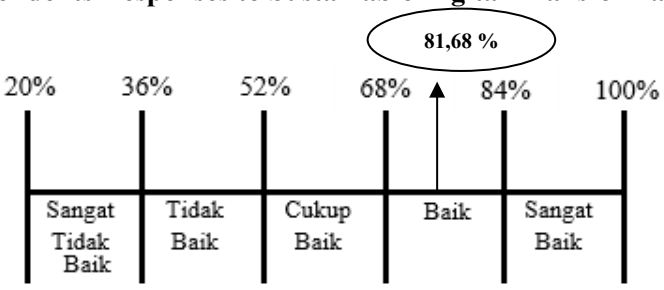
Source: Data Processing Results (2021)
Figure 4. Digital Technology Capabilities Variable Continuum Line

Respondents Responses to Digital Innovation Capabilities



Source: Data Processing Results (2021)
Figure 5. Digital Innovation Capabilities Variable Continuum Line

Respondents Responses to Sustainable Digital Transformation



Source: Data Processing Results (2021)
Figure 6. Sustainable Digital Transfomation Variable Continuum Line

Structural Model Testing (Outer Model)
Convergent Validity
Convergent validity is a proven validity if the score obtained by an instrument that measures concepts, or measures concepts by different methods has a high correlation. The indicator is said to be valid if the AVE (Average Variance Extracted) value is above 0.5 so it can be said that the measurement meets the criteria of convergent validity (Indrawati,2017:69).

Table 2. Convergent Validity Results

Variable	AVE	Critical Value	Model Evaluation
Digital Market Capabilities (X1)	0,631	>0,5	Valid
Digital Leadership Capabilities (X2)	0,705		Valid
Digital Technology Capabilities (X3)	0,766		Valid
Digital Innovation Capabilities (X4)	0,730		Valid
Sustainable Digital Transformation(Y)	0,644		Valid

Source: Data Processing Results (2021)

Discriminant Validity

Discriminant Validity is seen through cross loading factor measurement with AVE comparison and correlation between variables in a study. Discriminant Validity can represent the extent to which constructs empirically differ from other constructs (Hair et.al, 2014).

Table 3. Discriminant Validity Results

Indicator	Digital Innovation Capabilities	Digital Leadership Capabilities	Digital Marketing Capabilities	Digital Technology Capabilities	Sustainable Digital Transformation
IC1	0,631	0,460	0,565	0,208	0,183
IC2	0,533	0,360	0,411	0,075	0,076
IC3	0,612	0,558	0,397	0,134	0,180
LC1	0,376	0,606	0,388	0,308	0,316
LC2	0,612	0,558	0,397	0,134	0,180
LC3	0,480	0,583	0,438	0,240	0,237
MC1	0,526	0,382	0,554	0,131	0,140
MC2	0,355	0,339	0,528	0,208	0,231
MC3	0,520	0,399	0,582	0,153	0,149
MC4	0,364	0,408	0,540	0,206	0,208
SDT1	0,088	0,120	0,106	0,340	0,487
SDT2	0,138	0,273	0,194	0,457	0,538
SDT3	0,199	0,301	0,249	0,640	0,637
TC1	0,199	0,301	0,249	0,640	0,637
TC2	0,126	0,240	0,173	0,627	0,535
TC3	0,128	0,201	0,171	0,553	0,434

Source: Data Processing Results (2021)

Reliability Test

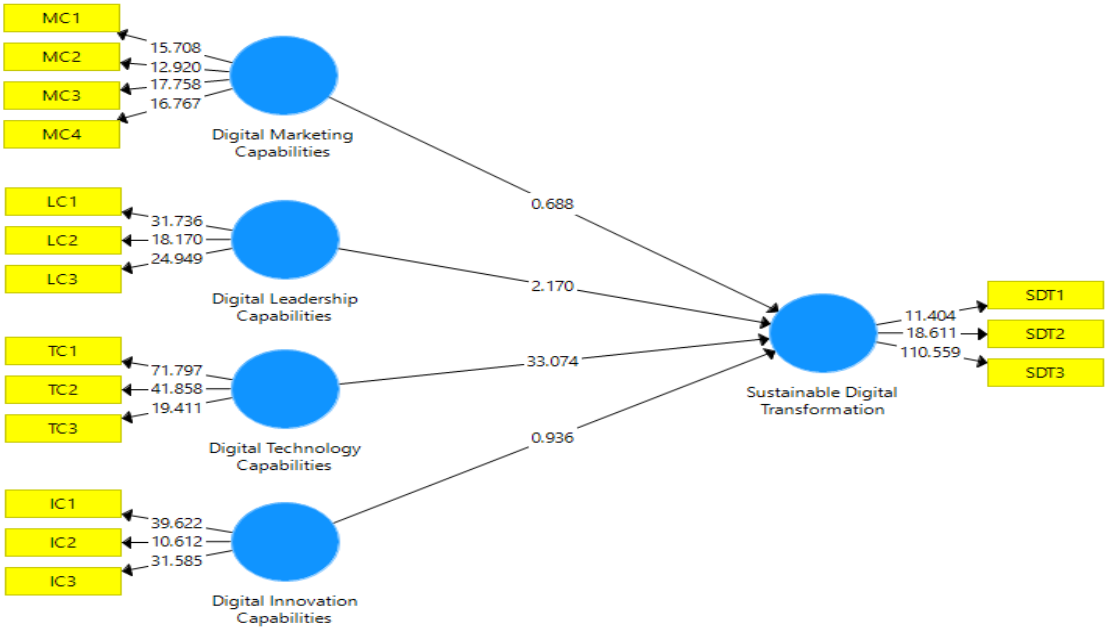
Table 4. ReliabilityTest Results

Variable	*Composite Realibility*	Critical Value	*Cronbach Alpha*	Critical Value	Model Evaluation
Digital Market Capabilities (X1)	0.872	>0,7	0,810	>0,6	Realibel
Digital Leadership Capabilities (X2)	0,877		0,798		Realibel
Digital Technology Capabilities (X3)	0,907		0,848		Realibel
Digital Innovation Capabilities (X4)	0,890		0,826		Realibel
Sustainable Digital Transformation(Y)	0,843		0,725		Realibel

Source: Data Processing Results (2021)

Based on the data of the above reliability test results, the Composite Realibility and Cronbach's Alpha values on each variable are worth more than 0.7 and 0.6 respectively so it can be said that the data has high reliability (Indrawati, 2017).

Structural Model Testing (Inner Model)



Source: Data Processing Results (2021)

Figure 7. Bootstrapping Output Display

f – Square Test

The value of f square is the magnitude of the influence between variables with Effect Size or f square (Wong, 2013). The value of f square >0.02 is considered small, >0.15 is considered medium, and the value >0.35 is considered large. Values less than 0.02 can be ignored or considered to have no effect (Sarstedt, 2017).

Table 5. f – Square Test Results

Variable	*f square*
Digital Market Capabilities (X1)	0,003
Digital Leadership Capabilities (X2)	0,019
Digital Technology Capabilities (X3)	3,025
Digital Innovation Capabilities (X4)	0,006

Source: Data Processing Results (2021)

Based on table 5, it can be seen that the value of f square that has the most effect is Digital Technology Capabilities with a value of f square 3,025. While Digital Market Capabilities has the weakest effect value with a value of 0.003

R – Square Test

The R square value is the determinant coefficient of the endogenous construct. The R-Square value is the determinant coefficient of endogenous constructs. The higher the R-Square value means the better the predictive model of the proposed research model (Indrawati, 2017).

Table 6. R – Square Test Results

Variable	*R-Square*
Sustainable Digital Transformation (Y)	0,809

Source: Data Processing Results (2021)

Based on Table 6, it can be seen that the R-Square value in the Sustainable Digital Transformation variable is 0.809. The R-Square value for the Sustainable Digital Transformation variable means the influence of Digital Market Capabilities, Digital Leadership Capabilities, Digital Technology Capabiltiies, and Digital Innovation Capabilities on Sustainable Digital Transformation by 80.9% and the remaining 19.1% is influenced by other variables outside of this study.

Hypothesis Test

To assess the significance of the predictive model in structural model testing, it can look at the t-statistic value between independent variables to dependent variables. According to Sarwono &Narimawati (2015:73) explained that to conduct hypothesis testing, it must compare the t-statistic (to) value with the t-table value (tα). With the provisions of acceptance of hypotheses as follows:

a. If the value to > tα, H0 is rejected and H1 is accepted.
b. If the value to < tα, H0 is accepted and H1 is rejected.

To assess the significance of the predictive model in structural model testing, it can be seen from the t-statistic value between independent variables to dependent variables in the coefficient path table on the SmartPLS output on the table 7

Table 7. Path Coefficient

Variable	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistic (|O/STDEV|)	P Values
Digital Market Capabilities -> Sustainable Digital Transformtion	0.041	0.041	0.059	0.690	0,342
Digital Leadership Capabilities -> Sustainable Digital Transformtion	0,075	0,0764	0.050	2.214	0.031
Digital Technology Capabilities -> Sustainable Digital Transformtion	0,593	0,592	0.026	34.242	0.000
Digital Innovation Capabilities -> Sustainable Digital Transformtion	0.066	0.064	0.071	0,936	0,243

Source: Data Processing Results (2021)

Based on the t-statistic (to) value in table 7, the test results for each hypothesis are as follows:

Based on the results of research variables conducted, it can be concluded that there are two hypotheses that are not accepted, namely digital market capabilities and digital innovation capabilities and there are two hypotheses accepted, namely digital leadership capabilities and digital technology capabilities. This is the basis of reference for companies to focus on developing digital leadership capabilities and digital technology capabilities variables in the hospitality industry in order to withstand technological disruption.

Hospitality industry business continues has been disrupted for the last few years. There is no doubt that this disorder caused by the explosion of the internet began mid-1990s and also web 2.0 in 2002. Social networks, blogs, and innovations that provide access to hospitality information is also very affect the hospitality business. Continue the growth of the internet and the availability of free information makes many parties doubt whether the hospitality industry can still peak, whether the market hospitality can still grow again. Hospitality industry leadership role in digital transformation demand action in four main areas (Westerman et al, 2014): framing the digital challenge, focus investment, engage the organization, and sustain the transformation. Leaders must first be sure that the leader of the seniors have the same vision of how this vision should work. according to Westerman et al, 2014, the first step is to understand the threats and opportunities that digitally presents to the organization e.g. effectiveness of the current way of working in the digital world, and the ability to detect new opportunities available related to customer experience, operational processes, and business models. The second Step is to create leadership capabilities to drive digital transformation in within the organization. Transformation intensity consists of a vision to sharpen the governance, and engagement, and it-business executive relationships in implement changes based on technology. Transformation elements intensity through top down coombinasi leadership and bottom-up innovation for drive digital transformation continue. To make digital vision a reality, executives must guarantee organizations make investments in the area of (Westerman et al, 2014), i.e. cutting off unproductive areas while make investments where necessary. Executives must identify in the area where companies should excel based on capabilities and strategic assets owned by current (Egbunike, et all., 2018). Then as capabilities develop, they can focus on other areas that should excel. Leaders must make digitization as a major part of the their strategy agenda (Kurniasari, et all., 2018). Digitization is a priority most important or very important in corporate strategy agenda. Moreover digitization agenda should get strong support from top executives who generally take on the role of actively pushing the agenda. When leaders support the importance of digitization, the implication is how organization to be able to better nimble and has a strong internal process. Some companies are well aware that there are still limitations to the model traditional organizations that make not sure how to adapt and change. Other responses of the hospitality industry facing digitization and development internet is so fast is adopt a multiplatform approach. The focus is on migrating to multi-platform information distribution and the impact of this approach on resources, organizations and strategies that must be implemented to create and build revenue streams. Deep digitalization context, interactivity is a key features of digital platforms. Utilize interactivity is effectively a the main source of answering challenges and opportunities. Relationships with customers must be done due to the increasing and the wider use of the platform interactive. Ability to understand customer preferences are the value of further sharpening the service and development of how to present it. Hospitality business that aims to gave birth to customer value proposition or transform a model operations need to develop a portfolio of new capabilities to be flexible and responsive face a rapid change of desire customer. Facing the digital age, among the required capabilities are the ability to design and present new business model. Hospitality companies should constantly explore ways best new to generate revenue, structure the company's activities, and take a position in a new industry or existing industries. Company should create its virtual community own or use a group that is already organized by customers. Ability to integrate the whole customer touchpoint is very important in managing digital operations. Automatically online, customers switch to email and social networks. Customer changes platforms and channels, comparing price via smart phone on minutes certain items, browse other items later, and make transactions through the PC. At between these interactions, customers expect consistency and clarity.

Managerial Implication

This research has implications for developing strategic management science based on Digital capabilities and sustainable Digital Transformation. It is also contribute to further research in the strategic management of hospitality industry. Digital market capabilities should be able to drive the performance of industrial business Hospitality. Digital market capabilities superiority is one of the characteristics of the organization that is capable of surpassing its competitors. By therefore, the company must investment for digital development market capabilities, which will provide benefits for the organization both to business growth and sustainable competitive advantage. Leaders must make

digitization asa major part of the hospitality industry strategy agenda (digital leadership capabilities). Digitization should be made the most important priority on the corporate strategy agenda. Besides that, the digitalization agenda should get strong support from top executives whogenerally take on the role of actively pushing the agenda. When leaders support the importance of digitization, the implication is how organization to be able to better nimble and has a strong internal process. The key to success on the agenda digital transformation lies in the ability to to ensure the speed of implementation. In the development of solutions focused on customer or system transformation and internal processes, the hospitality industry is still must strive to encourage initiative needed to deal with the agility of Competitors. But what is faced is implementation strength is much more difficult by because there is still a dependence on conventional systems that are sluggish and complex. In this context the role of the important too. In the hospitality industry, the business leaders in order to meet the customer expectations should strive to to change how you set your strategy and run the organization. The business leaders have long taken advantage of technology to increase productivity and efficiency, reaching new markets and optimize the suplly chain. What is new is the expectation of customers continue to constantly changing. The problems faced hospitality industry is how respond to these changes, how benefit from this opportunity to innovate, to make differentiation and growth, and how do all this at a cost efficient, using and optimizing the latest information technology as part of of the overall operational (sustainable digital transformation).

Conclusion

Based on the results of the overall descriptive analysis of variables Digital Market Capabilities, Digital Leadership Capabilities, Digital Technology Capabilities, Digital Innovation Capabilities and Sustainable Digital Transformation fall into the category of good with a percentage between 68 % - 84 %. This is based on the research of J. Johny Natu Prihanto, Florentina Kurniasari (2019), "Sustainable Digital Transformation In Hospitality Industry: Study Of The Hotel Industry In Indonesia" states that Sustainable Digital Transformation falls into the good category. This suggests that Variabel Digital Market Capabilities, Digital L eadership Capabilities, Digital Technology Capabilities, Digital Innovation Capabilities and Sustainable Digital Transformation can influence hotel leaders to transform digitally. The R-Square value for the Sustainable Digital Transformation variable means the influence of Digital Market Capabilities, Digital Leadership Capabilities, Digital Technology Capabiltiies, and Digital Innovation Capabilities on Sustainable Digital Transformation by 80.9% and the remaining 19.1% is influenced by other variables outside of this study. According to Lankshear and Knobel (2008) Sustainable Digital Transformation is influenced by culture change and Optimizing Processes. Meanwhile, according to Brian Solis (2015) factors that affect Sustainable Digital Transformation are technology, data, process, and organizational change. Based on this, it can be concluded that 19.1% that affect other variables outside of this study are culture change, Optimizing Processes technology, data, and organizational change.

Acknowledgements

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Knowledge Management Development in PT Phapros Tbk

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Abstract
The challenges of State-Owned Enterises (SOE)'s today are that knowledge management that is built must be able to anticipate the digital era and be able to provide solutions in accelerating the improvement of individual and organizational capabilities. PT Phapros, Tbk (Phapros) is a pharmaceutical company which is a subsidiary of PT Kimia Farma Tbk, which currently control shares up to 56,7% and the rest is held by the public, including employees. At present the situation of Pandemic Covid-19 has also changed the landscape of the business environment and created new normal conditions, one of them is digital awareness. Phapros needs to consider this situation in a knowledge management strategy that is aligned to Phapros business strategy. In this case, Phapros need to measure their gap of knowledge management maturity from the current situation and their expectation that is aligned to Phapros business strategy. The methodology were knowledge management survey, transfer of knowledge, focus group discussion, in-depth interview, and Knowledge Management road map workshop. Through this, Phapros will navigate its knowledge management process in harvesting knowledge implementation as innovation. By then, Phapros will have a sustainable competitive advantage as a result from knowledge management process.
Keywords: Knowledge Management, Phapros, Innovation

Introduction

According to the State-Owned Enterprise (SOE) Ministry (2019), SOEs is one of the economic activity actors that plays a major role in the national economy. The SOE Ministry hopes that SOEs will continue to grow in a sustainable manner and can contribute to the Government and the community. Sustainable growth comes from strong fundamental corporate conditions. When conditions of the globalization era are increasing competitively, SOE's fundamental strength and strong competitiveness are needed. In guiding SOEs to achieve the expected performance, the Ministry of SOEs uses various tools to assess the soundness of a company. The selection of Excellence Performance Assessment Criteria ("Kriteria Penilaian Kinerja Unggul/ KPKU") derived from the Malcolm Baldrige Criteria for Performance Excellence in evaluating SOE performance is intended to provide an integrated approach (method/system) for SOEs to achieve desired performance goals (Forum Ekselen BUMN, 2020).

According to SOE Excellence Forum ("Forum Ekselen BUMN/ FEB") (2020), performance of KPKU maturity level as shown in Figure 1.

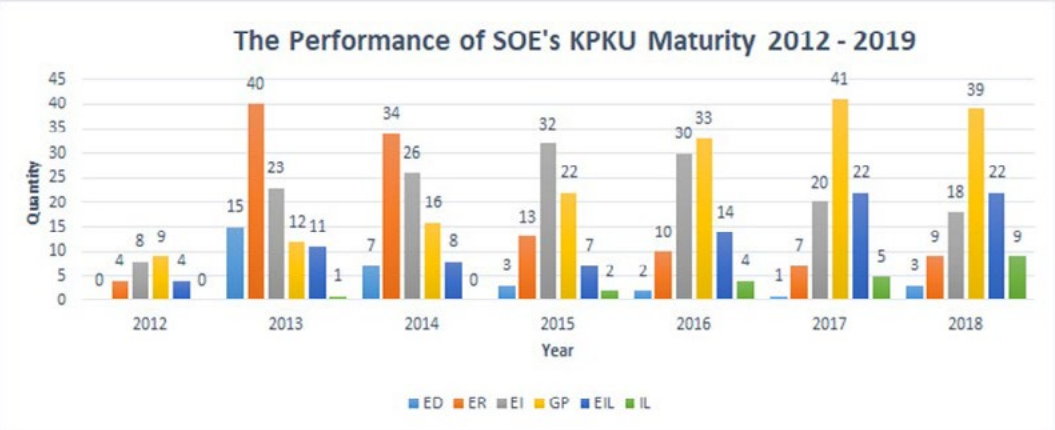


Figure 1. The Performance of SOE's KPKU Maturity 2012 – 2019
Source: Forum Ekselen BUMN, Business Performance Excellence Award 2020 (2020)

Figure 1 shows the performance of SOE's maturity level from year 2012 up to year 2018. This trend shows significant improvement for SOE in leveraging their maturity from lower level to higher level. But as for 2020, the trend starts to change because of the pandemic that hits the world and forces businesses to either be on halt or follow the new normal format and the virus that hits the world is called Corona Virus Disease or it's called COVID-19.

According to SOE Ministry (2019), the average SOE's KPKU score trend in the Measurement, Analysis, and Knowledge Management category relatively increased until 2018 as shown on Figure 2. Even though the KPKU average score shows an increasing trend, opportunities are still available to grow very broadly considering the achievement scores for almost all categories are still below 60% of the maximum score. Implementation of knowledge management must produce appropriate work strategies, and contained in the company's work plan, to be able to produce the desired performance. Good knowledge management, but not used to sharpen the company's strategy, ultimately cannot help the company improve its performance.

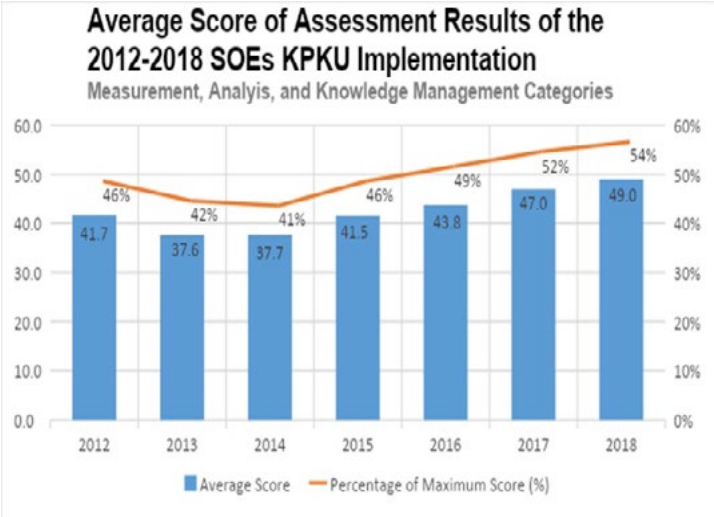


Figure 2. Average Score of Assessment Results of the 2012-2018 SOEs KPKU Implementation in the Measurement, Analysis and Knowledge Management Categories
Source: SOE Ministry Macro Research 2019 (2019)

The challenges of SOE's today are that knowledge management that is built must be able to anticipate the digital era and be able to provide solutions in accelerating the improvement of individual and organizational capabilities.

Many SOEs develop and have a well knowledge management. According to Hutabalian (2016), Knowledge Management development in PT Aneka Tambang Tbk needs to be done systematically. One of them is the measurement of the level of Knowledge Management Readiness for identifying and analysing the need for the Knowledge Management Development better. The method was used is the nine Knowledge Management Competencies based on Knowledge Based Organization.

There is a gap in measurement, analysis, and knowledge management effectiveness based on Figure 2. That is an opportunity for improvement to SOEs to increase the level of maturity that will leverage the performance of company. The impact of COVID-19 will accelerate the implementation of digital mindset in knowledge management.

PT Phapros, Tbk (Phapros) is a pharmaceutical company which is a subsidiary of PT Kimia Farma Tbk, which currently control shares up to 56,7% and the rest is held by the public, including employees (PT Phapros Tbk, 2015). Currently, the company has produced more than 284 items of drugs, and most of them are the result of the company development (non-licensed) that are classified into ethical, generic, OTC, and

Agromed. Beside producing its own drugs, Phapros is trusted by the other pharmaceutical companies to produce pharmaceutical products through Contract Manufacturing cooperation. The products in addition to national needs as well as to the needs of other countries through export cooperation established since 2013. Until now, there are six products distributed in neighbouring countries, such as Cambodia. In addition, the company has begun to expand the scope of its business in the sector of non-drug form of non-electro medical devices that have obtained distribution permission from the Ministry of Health of the Republic of Indonesia.

Phapros' vision is to be a prominent pharmaceutical company that brings the best health products through professional management and strategic partnerships to enhance the quality of life. One of Phapros's missions is to provide shareholders return that reflect outstanding performance and to adequately reward those who invest ideas and work in our company.

One successful measure of its vision is KPKU score that represents the performance of an organization based on KPKU Framework. KPKU Framework consists of 7 Categories with 21 items. It was measured by assessment of external assessors. The results of the assessment are called Feedback Report (FBR). Based on FBR in the year 2020, the maturity level of KPKU score was 523,25. This score was in the Good Performance maturity band. One of 21 items that reported in FBR was an item related to Knowledge Management. The score of this item was 45%. Phapros need to improve the knowledge management performance. Knowledge Management's strategy in Phapros should be embedded in its strategic development. This action can leverage the maturity level of Knowledge Management Phapros.

In first quarter 2020, Phapros increased 28.97% in sales, but the company still lost Rp. 13 billion. However, Phapros is targeting revenue and profit targets will grow double digits compared to the 2019 Fiscal Year, it is over 10 percent growth. Based on 2019 data, Indonesia's pharmaceutical market grows 6-7 percent on average (indopremier, 2020). In this pandemic, the pharmaceutical industry is quite affected, this also happened to Phapros.

First, the level of hospital filling is getting smaller due to people are people's fear of visiting places that are at risk of COVID transmission. This can have impact to the level of drug consumption, it is also getting smaller. Second, Indonesian Dentists Association issued recommendation for the dentists are not to open a practice during this pandemic because it is quite risky. Third, there are PSBB period that make people are not going to travel and use public transportation, this has impact to the backbone products from Phapros. However, there is still growth in Becefort's multivitamin products, which were not previously included in the company's backbone products, which increased by 30 times compared to last year due to the high demand for vitamin products during this pandemic (Laporan Pelaksanaan Public Expose PT Phapros, Tbk (PEHA), 2020).

To overcome the challenges and to achieve the target, Phapros has several strategies as follows: operational cost savings with the New Normal approach, managing product portfolios and focusing on selling products that produce high margins in line with economic dynamics and availability of raw materials, strengthen synergy with holding and group, maintaining the level of satisfaction and quality of relationships with customers and stakeholders, and adaptation, innovation, digitization and collaboration (Atmoko, 2020).

Many studies and research conclude that Knowledge Management and innovation has positive relationship. In addition to that, in pharmaceutical industry, effective knowledge management is also the key enabler, it supports iteration and improvement of products (Marty, 2011). In achieving the company's strategy, it is important to run Knowledge Management program embedded with business strategy (Mardani, Nikoosokhan, Moradi, & Doustar, 2018).

Pharmaceutical industry is an industry where knowledge is intensive and needs up to date applicable knowledge and to all intents and purposes. In order to be able to provide sufficient and worthwhile benefits to an organization and enhance the drug, Knowledge Management research is needed (Alavi & Leidner, 1999) as the challenges of the pharmaceutical industry is to be able to keep up with the tons amount of information and knowledge within the industry itself in order to be out there competing with rival pharmaceutical companies. (Howells, 2002).

Knowledge Management has been implemented at Phapros. Phapros builds and manages organizational knowledge, by creating a SINAU Knowledge Management application through intranet portal, https://dashboard.phapros.co.id/sinau. Application that can be used as a platform for: provision of

sources of knowledge, knowledge management systems, the mechanism of accessing knowledge processes, collection, and transfer of knowledge through information system facilities.

Although Phapros developed a knowledge management application, based on FBR results, there were no measurements of effectiveness of knowledge management performance indicators yet. The approach is not integrated yet into the core business system. This condition can make Phapros lose their opportunity to add sources of innovation, which has the potential to inhibit the achievements of Pharos targets.

At present the situation of Pandemic Covid-19 has also changed the landscape of the business environment and created new normal conditions, one of them is digital awareness. Phapros needs to consider this situation in a knowledge management strategy that is aligned to Phapros business strategy.

On this project, it is an opportunity to help Phapros in improving its business with the main focus of knowledge management development. It is relevant to business situations nowadays in the midst of COVID-19 how Phapros empower all of employees to strive to be productive, highly engaged, and innovative in the midst of COVID-19 and post of it.

In this case, Phapros need to measure their gap of knowledge management maturity from the current situation and their expectation that is aligned to Phapros business strategy. Therefore, Phapros will need to have a knowledge management strategy to support one of their missions, "... to adequately reward those who invest ideas and work in our company". Through this, Phapros will navigate its knowledge management process in harvesting knowledge implementation as innovation. By then, Phapros will have a sustainable competitive advantage as a result from knowledge management process.

I. GENERAL THEORY

A. Knowledge Management

According to Tjakraatmadja and Lantu (2006), the demand of agility in organizational is triggered by the growth and development of knowledge. Therefore, knowledge must be treated as a valuable asset. Knowledge can create added value and increase competitive advantage for organization (Drucker, 1999). Through having knowledge in the organization, organization can innovate to survive in every condition and challenges. Organizations that want to move forward must have innovative capabilities to improve innovation performance both individuals and organizations, through the ability to share knowledge (Assegaff, 2016).

Nowadays, modern organizations are competing to innovate driven by knowledge from their employees (knowledge driven innovation). The tools that organization uses in conducting its business continue to evolve, but knowledge, experience, and intellectual capital are always being used. In this case, Knowledge Management is needed to manage and control them within the organization in achieving best business performance. Knowledge Management become a tool for management to create productivity, quality, profitability, and innovation by combining Knowledge Management and business strategy to achieve business objectives and organization performance and operation performance.

There are many definitions of Knowledge Management, Tjakraatmadja and Kristinawati (2017) draw patterns from its definition. The patterns are shown in Table 1.

Table 1. Patterns of Knowledge Management Definition

1	Knowledge Management is an individual, team, and organizational collaboration for managing individual/organizational knowledge through the process of identifying, creating, storing, distributing, and using collective knowledge to support the organization's business strategy in order to have competitive advantage.
2	Knowledge Management is a management tool for creating innovation based on knowledge correctly and quickly, through integration knowledge workers (People), Process (policy, procedure, governance), and technology in order to facilitate the distribution, storage, use of knowledge in the organization.

3	Knowledge Management is a management tool for simplifying knowledge sharing to increase effectiveness knowledge enrichment process, distribute knowledge until innovation happened in an organization.
4	Knowledge Management is a management tool to enrich or replicate the use of knowledge/best practices within organization for expanding the use of them in every business unit and achieving the objectives efficiently and effectively.
5	Knowledge Management is about how organization to manage knowledge workers, identify the knowledge that they have, documenting knowledge, and distribute the knowledge to other business unit, also develop knowledge or innovate based on knowledge.
6	Knowledge Management is facilitating creative, imaginative, and innovative process through transforming tacit knowledge becoming explicit or renew knowledge to do innovation based on new knowledge.

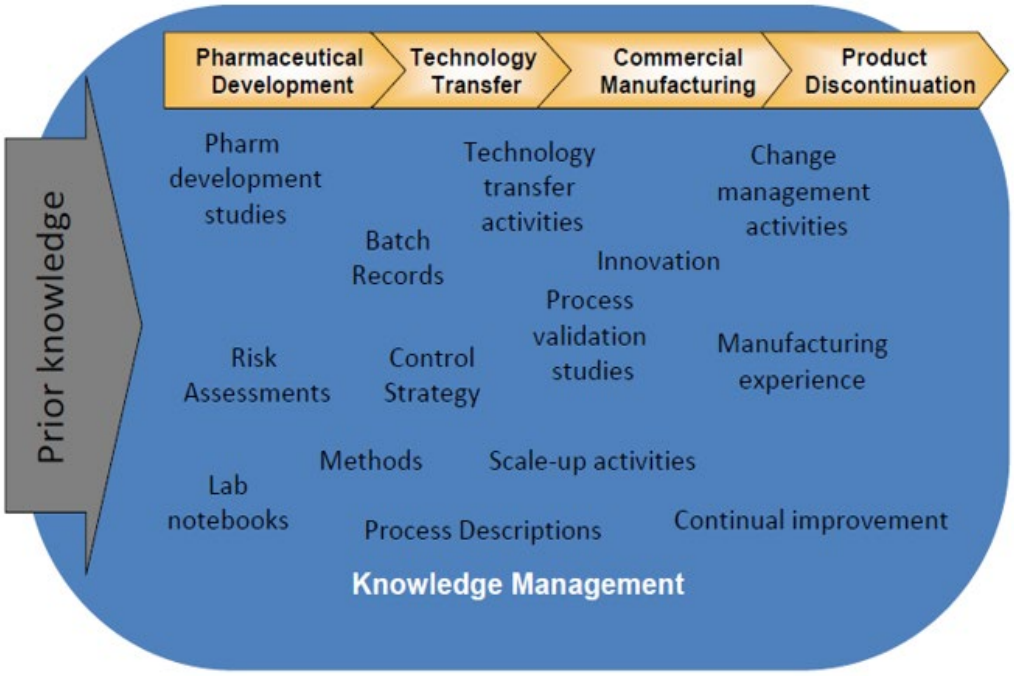
From the patterns of definition above, Tjakraatmadja and Kristinawati (2017) also conclude that there are 5 (five) basic process in Knowledge Management. They are: (1) identification; (2) storing/searching; (3) sharing/transferring; (4) applying; and (5) creating/developing.

B. Relationship between Knowledge Management and Innovation

Many studies and research have been done to find out the relationship between Knowledge Management and innovation, Knowledge Management can support business innovation in comparison to other variables. Knowledge Management activities impact innovation and organizational performance directly and indirectly through an increase in innovation capability. Knowledge creation, knowledge integration, and knowledge application facilitate innovation and performance (Mardani, Nikoosokhan, Moradi, & Doustar, 2018). This can be done through running a Knowledge Management program embedded with business strategy. Business strategy is the main driver of knowledge capabilities, furthermore business strategy and knowledge capabilities can impact the effectiveness of organization. In addition, the capability of knowledge infrastructure is also the key important (Smith, Dion, & Mills, 2010).

In addition to the studies above, the process of knowledge management such as knowledge sharing significantly improves innovation capability (Assegaff, 2016). Sharing knowledge between knowledge workers in the organization is a natural thing and should be done in the shake of the growth organization in terms of financial and other aspects. In the pharmaceutical industry, effective knowledge management is also the key enabler, it supports iteration and improvement of products (Marty, 2011). Knowledge evolves across the lifecycle from the pharmaceutical development, technology transfer, commercial manufacturing, until product discontinuation as illustrated in Figure 3.

Figure 1.



Knowledge across the lifecycle
Source: (Marty, 2011)

There are challenges and opportunities in the development of innovation in pharmaceuticals. This is a risky business, in which it needs to consider the quality of the products, the life/death health risk to the customers, and various regulations. In order to save the pharmaceutical firms, they need to know what they have known, they need to make better decisions, do the research faster than the competitor. In this industry, Knowledge Management has a positive impact in drug development, particularly in speeding up the access to information and knowledge across organization. Therefore, many of American Productivity & Quality Centre (APQC) pharmaceutical members realigned their Knowledge Management initiatives to address these issues (Leavitt, 2003).

In the pharmaceutical industry, innovation is not limited to the development of a tangible product, but also links to the improvement of the organization process to induce a competitive advantage. According to Terziovski and Morgan (2004), innovation is defined as a process of creating and developing new products or services through collaborative team processes and

mechanisms, which utilize and empower the skills and knowledge of the people. This definition underlines that knowledge facilitates innovation, it can create creative and innovative behavior.

C. Knowledge Based Organization Framework

Knowledge management is increasingly recognized in Indonesia in 2005 through a research-based organization that has become the licensee partner of the Most Admired Knowledge Enterprises (MAKE) Study. Dunamis uses MAKE framework as its Knowledge Management model and The 9 Competencies To Build Knowledge Management Services from Know- house (Dunamis strategic partner in South Africa) as it world class approaches (product/consulting/kn_management, n.d.).

1. MAKE framework

This framework as describes in Figure 4 shows how an organization creates organizational value through Knowledge Management. Organization needs to innovate, does organizational learning, gets knowledge from customer, and manages intellectual capital. All these processes need to be supported with organizational culture where entities are always doing knowledge sharing and collaborating, and the strong leadership.

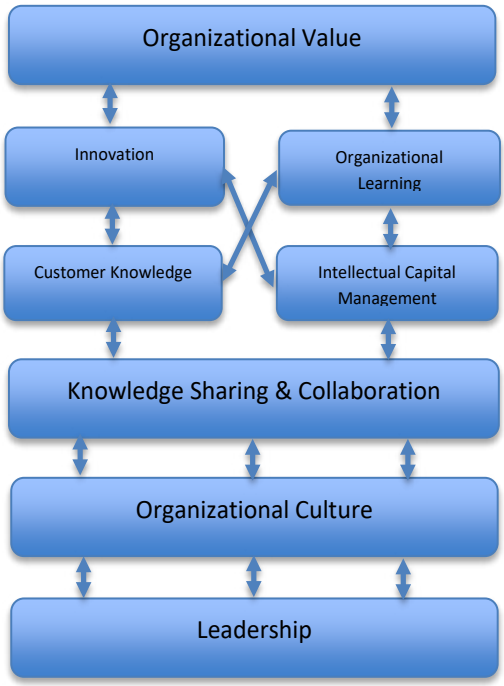


Figure 2. MAKE Framework
Source: Dunamis

2. The 9 Competencies To Build Knowledge Management Services

Figure 5 shows the 9 competencies that use to build knowledge management in an organization.

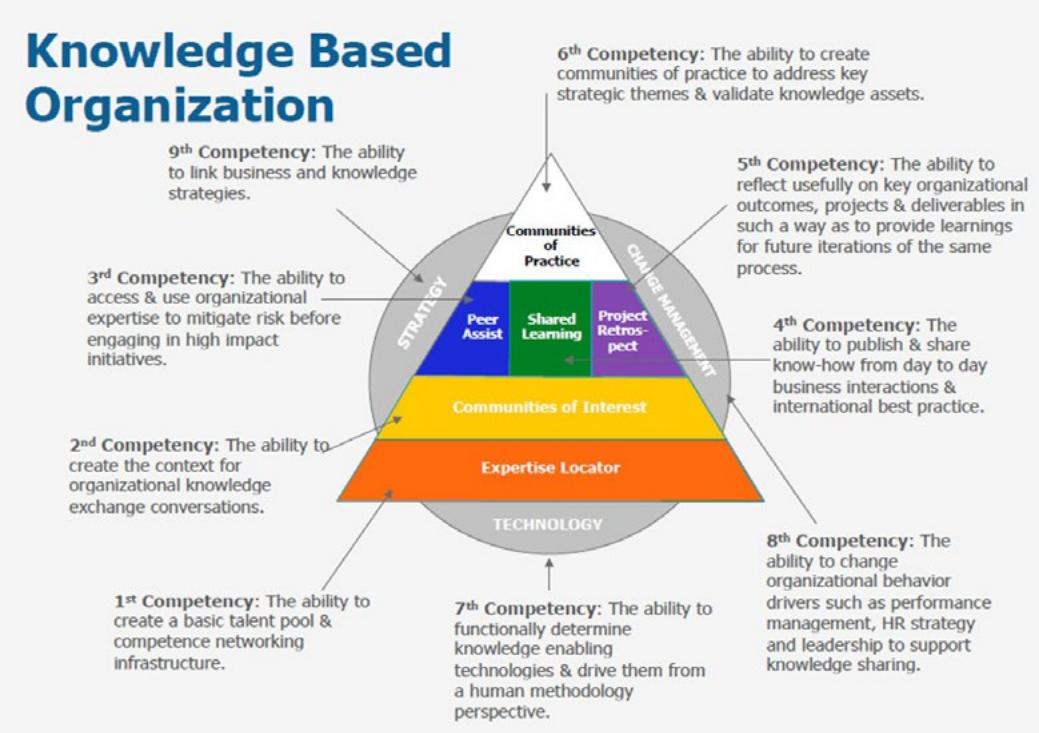


Figure 3. Knowledge Based Organization
Source: Dunamis

D. Knowledge Management Strategy

As mention in the ninth competency, connecting the business and knowledge management strategy is important for organization. Knowledge Management in organization will create the best result when it becomes a part of organization strategy (Zack, 1999). Knowledge Management is not only related with Information Technology with the main focus on storing and disseminating written knowledge (explicit) through the organization. Knowledge Management will be more powerful when knowledge workers share their knowledge. Therefore, for organization, it is important to motivate employees to be committed in developing Knowledge Management. This motivation will be raised when employees are motivated to achieve and do continuous learning. To create knowledge sharing culture, organizations need to develop policies of sharing and the dissemination of these policies in the organization. Knowledge sharing culture, allow the development of new insights, ideas or products which might result in the formation of creative initiatives. In other word culture-based creativity is associated with people ability to work in a knowledge sharing culture.

E. Knowledge Management Tools

In addition to the strategy, tools are needed in helping organization to connect the dots, to align between strategic planning, process management, and others processes such as knowledge management. These tools can help knowledge management to be integrated with process management, thus improvement efforts are integrated and yield robust results. Knowledge Management tools are not only related with Information Technology (IT-based), these tools can be divided as 2 (two) areas. First, Knowledge Management techniques and Knowledge Management technologies (Anumba, Egbu, & Carrillo, 2005). Brainstorming,

Communities of Practice, face to face interactions, post-project reviews, recruitment, apprenticeship, mentoring, training are the examples of Knowledge Management techniques. On the other side, Knowledge Management technologies mainly make use of technology to capture, store and disseminate the knowledge.

F. Knowledge Management in Pharmaceutical Industry

Pharmaceutical industry categorized as industry with extensively regulated, in addition it has long development life cycles. However, the ability to innovate is diminishing (Lilleoere & Hansen, 2011). There are several factors that hinder the growth of innovation in the pharmaceutical industry, as follows high cost of sharing knowledge, limitation of information technology, lack of socialization, lack of trust culture, poor leadership, organizational politics, and time pressure (Qureshi & Evans, 2015).

Knowledge must be valued and managed as critical asset, this is also applied to pharmaceutical industry across the product lifecycle. Gaining the value from knowledge, organization must implement the practical, integrated, and systematic approaches for the identification, capture the critical knowledge assets (Kane, 2018).

G. Change Management

Change Management is needed in overcome the challenges in implementation of new idea/project in organization that needs changes in its implementation. Research conducted by John Kotter has proven that unfortunately major change efforts do not always produce the desired results. Therefore, John Kotter introduced “Kotter's 8 Step Change Model” to enhance an organization's ability to change and increase the chances of success (Kotter, 1996).

II. METHODOLOGY

This methodology uses 4 (four) phases in developing solutions, roadmap, and quick win Knowledge Management in Phapros. The proposed solutions is how to develop, utilize, and optimize Knowledge Management in Phapros based on the current condition towards the business strategy especially in innovation capability. Innovation capability becomes the main focus because Knowledge Management through knowledge sharing within employees tends to create new ideas for processes and products innovation (Alhusseini. S., 2013). However, Knowledge collecting based on Information Technology is not significant in generating new ideas (Saenz. J., 2012).

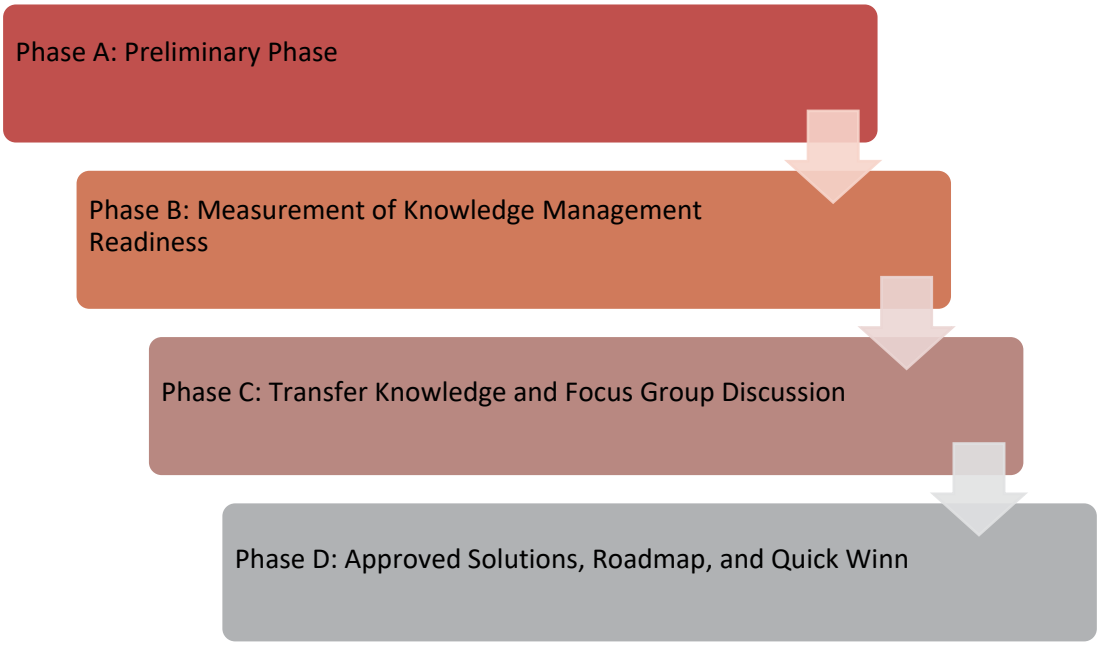


Table 2 shows the objectives for every phase in this project.

Table 2. Phase and Objective for this reserch

Phase	Objective
Phase A: Preliminary Phase	a. Review the organizational context for conducting Knowledge Management development in Phapros. b. Identify the established frameworks, methods, and processes.
Phase B: Measurement of Knowledge Management Readiness	a. Conduct the survey for employee representatives in Phapros. b. Identify the condition (readiness and maturity) based on the Knowledge Management framework. c. Identify the potential for development and improvement Knowledge Management in Phapros. d. Define solutions and establish a roadmap.
Phase C: Transfer Knowledge, Interview, and Focus Group Discussion	a. Transfer knowledge to change management team champion in Phapros to create awareness and knowledge culture. b. In-depth interview with Board of Directors and Knowledge Management Key Stakeholders in Phapros. c. Focus Group Discussion to align business strategy Phapros with the proposed solutions, roadmap, and Quick Win Programs.
Phase D: Approved Solutions, Roadmap, and Quick Win Programs	Finalization solutions, roadmap, and Quick Win Programs.

Measurement of Knowledge Management readiness aims to identify the readiness Phapros to utilize Knowledge Management to be integrated with the core business system. Accordingly, Phapros can innovate

driven by knowledge and indirectly can be Knowledge Based Organization. To begin with, this project uses a survey to obtain the primary data. The survey is conducted with the employees of Phapros to measure the readiness of Phapros.

The survey uses an ordinal scale (1-7) with 45 closed questions and 2 open questions. The question of survey is divided into 9 areas based on The 9 Competencies To Build Knowledge Management Services. To present the survey result, this paper use the average of respondents' answers in every question. In addition, to gain information from the average, there is interpretation guideline that taken from Knowledge Management Certification from Dunamis, as shown in Table 3.

Table 3. Interpretation guideline

	% Favorable	% Unfavorable	Recommendation
Very Favorable	75% or higher	Less than 20%	Your strength (protect)
Favorable	65% - 74%	Less than 20%	Nurture
Moderately Favorable	55% - 64%	Less than 20%	Enhance
So-So	Less than 55%	Less than 20%	Early warning
So-So	Any percent 20% - 24%		
Moderately Unfavorable	Any percent	25%-39%	Some improvement needed
Unfavorable	Any percent	30%-40%	Major improvement needed
Very Unfavorable	Any percent	40% or higher	Urgent action needed

The survey is intended to measure the nine competencies that organization must have in becoming Knowledge Based Organization. These nine competencies are presented by indicators as shown in Figure 5, it is 5 indicators for each competency. However, this project focuses on the analysis of how Knowledge Management can create value to the organization. Therefore, this project uses the combinations of multiple competencies (indicators) as presented in Table 4. These combinations represent the dimension to be knowledge enterprise based on MAKE framework as described in Figure 4. Teleos and Dunamis have conducted research that there are 8 (eight) dimensions that can be success factor in gaining organization value through Knowledge Management.

Table 4. Dimension to be knowledge enterprise

Dimension	Average of indicators
First dimension: forming a culture of organizational knowledge	STR-1, STR-4, COI-2, PA-1, CM-1, CM-4
Second dimension: developing knowledge workers through senior management leadership	STR-3, COI-4, CM-2
Third dimension: develop and produce knowledge-based products	COI-4, COI-5, COP-3, COP-4
Fourth dimension: maximizing the value of intellectual capital	EL-5, SL-2, PR-2, PR-5, CM-5, TECH-3, TECH-4

Dimension	Average of indicators
Fifth dimension: creating and maintaining a knowledge-sharing environment	Part 1: PA-2, PA-3, SL-1, COP-1, COP-2, TECH-5 Part 2: EL-1, EL-2, COP-1, COI-1, COI-3
Sixth Dimension: creating and maintaining a culture of continuous learning	Part 1: EL-1, EL-3, EL-4, PA-4, PA-5 Part 2: SL-3, PR-3, PR-4, COP-5, TECH-1
Seventh dimension: managing stakeholder knowledge to create value and company intellectual capital	SL-4, SL-5, TECH-2
Eight Dimension: managing company knowledge to generate value for stakeholders	STR-2, STR-5, PR-1

Transfer of knowledge will be held in Phapros to change management team champion through online meeting via Zoom. Transfer of knowledge is part of change management to achieve successful transformation. The main objective of this transfer of knowledge is to equip the team with the skills and abilities needed after the change is implemented. This activity will be divided into 2 (two) days. First day focus on the theory, on the second day concentrate on the study case Phapros.

In-depth interview will be conducted to obtain an accurate qualitative information from the representatives of manager or board of directors Phapros. This interview focuses on the long-term plan and the pain point of Phapros. The estimation duration is about 2 (two) hours. Before interview, there will be information given about the projects and confidentiality. It aims that the participant understands the context, therefore he/she can explore his/her experiences, perceptions, insights, and other issues.

One of deliverables in this project is roadmap in aligning business strategy and knowledge management Phapros. Roadmap is defined through this step as follows: (1) assess current condition using Knowledge Management readiness; (2) aligning business strategy and knowledge management; (3) proposed solution; (4) defining roadmap for solution implementation. In adjusting the proposed solution and roadmap, this project use Focus Group Discussion. This discussion involves the change management team and management representatives.

III. FINDING AND DISCUSSION

A. Survey Results

The survey identified the current condition of nine competencies Phapros to become a Knowledge Based Organization. The overview of nine competencies Phapros is shown in Figure 3.

Figure 6. Radar Diagram – The 9 Competencies to Build Knowledge Management Services in Phapros

The results of the survey (those competencies) were processed into 8 dimensions using the MAKE Framework model.

a First dimension: forming a culture of organizational knowledge

This dimension measures the extent to which the organization develops and directs the behavior of employees to develop knowledge by directing strategies, structures, policies, systems, and efforts to inculcate behavioral values.

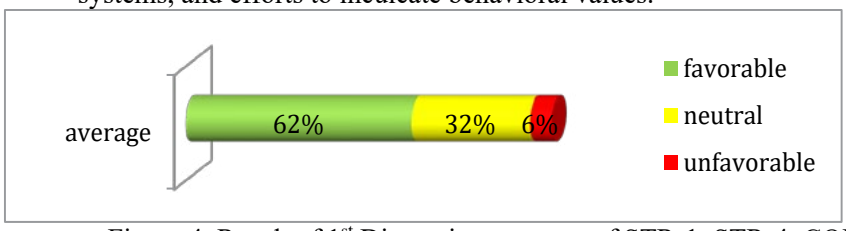


Figure 4. Result of 1st Dimension, average of STR-1, STR-4, COI-2. PA-1, CM-1, CM-4

Table 5. Quantitative survey interpretation for first dimension

Indicators		Respondents' Answer			Interpretation	Recommendation
		favorable	neutral	unfavorable		
STR-1	Phapros has clear plans on managing companies' knowledge in order to support the companies' strategy in achieve their vision	66%	31%	3%	Favorable	Nurture
STR-4	Phapros develop strategy, system and procedure (SOP) for managing Knowledge Management	69%	27%	5%	Favorable	Nurture

Indicators		Respondents' Answer			Interpretation	Recommendation
		favorable	neutral	unfavorable		
COI-2	The work environment enables me to talk and communicate with each other with ease.	60%	31%	9%	Moderately Favorable	Enhance
PA-1	Asking for assistance is viewed as a positive behavior as it became something that is encouraged to do and getting used to it to become a work culture	53%	40%	6%	So-so	Early warning
CM-1	Phapros have programs to push/encourages employees to learn independently, innovate and share knowledge with each other	61%	33%	5%	Moderately favorable	Enhance
CM-4	Employees are evaluated through performance review or rewarded based on some of the following KPI: learning or expertise, innovating, learning from the successes and failures of sharing	61%	32%	7%	Moderately favorable	Enhance
Average		62%	32%	6%	Moderately favorable	Enhance

Table 7 shows the interpretation for the first dimension. All of indicators show "Moderately Favorable", except indicators PA-1 (Asking for assistance is viewed as a positive behavior as it became something that is encouraged to do and getting used to it to become a work culture). It shows "so-so" which means it can be early warning for Phapros.

b Second dimension: developing knowledge workers through senior management leadership

Second dimension measures how an organization encourage and direct the role of leaders in empowering employees to develop organizational knowledge. This parts also identifies the extent to which the company leader has a clear vision and articulates it to all employees, including a vision of how the organization will be developed into a knowledge-based organization.

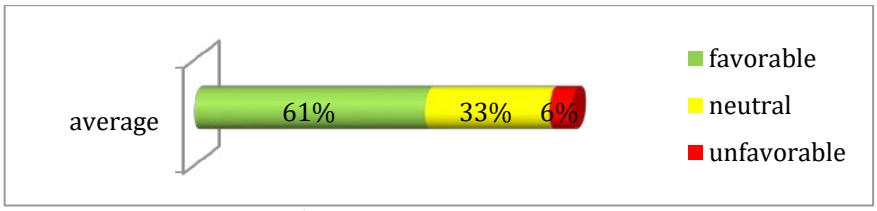


Figure 5. Result of 2nd Dimension, average of STR-3, COI-4, CM-2

Table 6. Quantitative survey interpretation for second dimension

Indicators		Respondents' Answer			Interpretation	Recommendation
		favorable	neutral	unfavorable		
STR-3	Phapros has assigned someone who will be in charge of managing the companies' Knowledge Management	59%	34%	7%	Moderately favorable	Enhance
COI-4	I have opportunity to give out opinions about alternative process in a project/work	73%	25%	2%	Favorable	Nurture
CM-2	"Wants to share experiences" is written in the Job Description or in leadership development or succession planning program.	51%	40%	9%	So-so	Early warning
Average		61%	33%	6%	Moderately favorable	Enhance

From three indicators as shown in Table 8, the most prominent is COI-4 (I have opportunity to give out opinions about alternative process in a project/work). This indicates that Phapros involve employees in organizational decision making. However, indicator CM-2 ("Wants to share experiences" is written in the Job Description or in leadership development or succession planning program) shows "so-so" which means Phapros needs to create program to generate knowledge sharing behavior. This program can be included in the job description or leadership program.

c Third dimension: develop and produce knowledge-based products
This dimension captures the ability of organization to create added value to the product or create innovation utilization of knowledge possessed by employees.

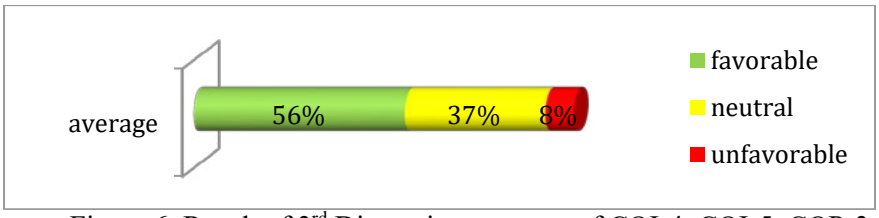


Figure 6. Result of 3rd Dimension, average of COI-4, COI-5, COP-3, COP-4

Table 7. Quantitative survey interpretation for third dimension

Indicators		Respondents' Answer			Interpretation	Recommendation
		favorable	neutral	unfavorable		
COI-4	I have opportunity to give out opinions about alternative process in a project/work	73%	25%	2%	Favorable	Nurture
COI-5	There are brainstorming sessions on new ways Phapros may/can operate	48%	44%	8%	So-so	Early Warning
COP-3	There is a community or certain function that examine, analyse, and validate new information that is acquired by the organization in which information are valid and not a discourse	49%	41%	10%	So-so	Early warning
COP-4	There is a lot of chances/opportunities where employees from different functions/divisions meet each other to share knowledge and innovate	52%	38%	10%	So-so	Early warning
Average		56%	37%	8%	Moderately favorable	Enhance

Table 9 indicates that Phapros provides opportunities for employees to give their opinion in providing alternatives or solutions in the implementation of work or project. This can drive innovation in Phapros. However, for improvement, there should be a community or function to examine, analyse, and validate new information obtained by the organization.

d Fourth dimension: maximizing the value of intellectual capital

This fourth dimension observes how organization sees knowledge as an important asset. It overlooks how these intellectual assets are captured, developed, and protected.

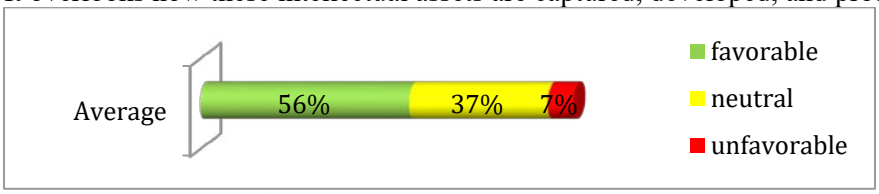


Figure 7. Result of 4th Dimension, average of EL-5, SL-2, PR-2, PR-5, CM-5, TECH-3, TECH-4

Table 8. Quantitative survey interpretation for fourth dimension

Indicators		Respondents' Answer			Interpretation	Recommendation
		favorable	neutral	unfavorable		
EL-5	When an expert leaves the company, Exit Interview is conducted to gain knowledge, experience, and their network.	44%	46%	10%	So-so	Early Warning
SL-2	New processes, procedures or policy that is developed by a certain region or unit will be applied to another unit or region as well.	50%	44%	6%	So-so	Early warning
PR-2	Past lessons should be and will always be the guide for the whole company	59%	37%	4%	Moderately favorable	Enhance
PR-5	Every important meeting will be recorded (voice or video) so that the footage can be used as a lesson for the next project	44%	42%	14%	So-so	Early warning
CM-5	Phapros knows any knowledge which are assets to the company and Phapros have the	62%	32%	7%	Moderatley favorable	Enhance

Indicators		Respondents' Answer			Interpretation	Recommendation
		favorable	neutral	unfavorable		
	policies to protect it.					
TECH-3	Phapros have intranet or database containing policies, procedures and working processes	68%	29%	2%	Favorable	Nurture
TECH-4	Database used by Phapros is trusted and reliable and maintained/updated regularly	66%	30%	4%	Favorable	Nurture
Average		56%	37%	7%	Moderatley favorable	Enhance

From Table 10, it can be concluded that in the case of intellectual management, Phapros has policies, intranet, or database that contains policies, procedures, and working processes. Furthermore, this database is trusted and reliable, and maintained regularly. On the other side, exit interview policies is necessary to get a professional network of experts who are leaving the company. Phapros also needs to record the important meeting to be used for further learning.

e Fifth dimension: creating and maintaining a knowledge-sharing environment

This dimension captures the ability of organization to create environment that supports sharing knowledge and collaborating as a core process in developing organizational knowledge.

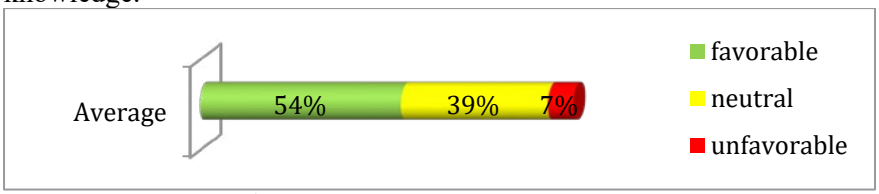


Figure 8. Result of 5th Dimension, average of PA-2, PA-3, SL-1, COP-1, COP-2, TECH-5

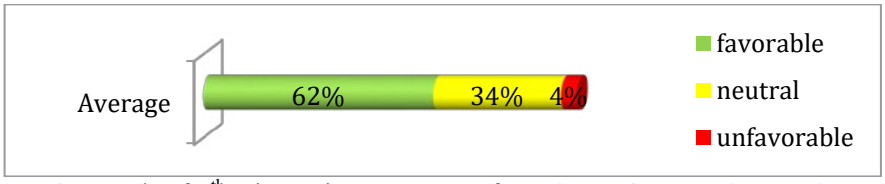


Figure 9. Result of 5th Dimension, average of EL-1, EL-2, COP-1, COI-1, COI-3

Table 9. Quantitative survey interpretation for fifth dimension part-1

Indicators		Respondents' Answer			Interpretation	Recommendation
		favorable	neutral	unfavorable		
PA-2	Experienced employees or experts are encouraged/pushed to help employees that lack experience	64%	31%	5%	Moderately favorable	Enhance
PA-3	Company considers involving employees cross division or unit in a project	54%	41%	4%	So-So	Early warning
SL-1	All employees share or publishes knowledge acquired from trainings, seminars, and conferences	48%	43%	9%	So-So	Early warning
COP-1	Cross-functional team are often formed to overcome certain business challenges	45%	47%	7%	So-So	Early warning
COP-2	Company actively supports networks/community that aim for collaborative strategy	46%	42%	13%	So-So	Early warning
TECH -5	Technology that connects employees between different locations is enough to meet the needs	65%	31%	3%	Favorable	Nurture
Average		54%	39%	7%	So-So	Early warning

Table 10. Quantitative survey interpretation for fifth dimension part-2

Indicators		Respondents' Answer			Interpretation	Recommendation
		favorable	neutral	unfavorable		
EL-1	Experts in their own respective fields coordinates with each other with no friction at work hours to talk about	62%	34%	4%	Moderately Favorable	Enhance

Indicators		Respondents' Answer			Interpretation	Recommendation
		favorable	neutral	unfavorable		
EL-2	Coordination across divisions and regions goes well without problems	61%	35%	4%	Moderately Favorable	Enhance
COP-1	Cross-functional team are often formed to overcome certain business challenges	45%	47%	7%	So-So	Early warning
COI-1	My colleagues and I are encouraged to talk/discuss informally about work at work hours	62%	34%	4%	Moderately Favorable	Enhance
COI-3	My colleagues and I often consult with each other about the work I do.	78%	20%	1%	Very Favorable	Strengths (Protect)
Average		62%	34%	4%	Moderately Favorable	Enhance

From Table 11 and Table 12, there is one indicator which has a "very favorable" rate, where employees often consult each other about the work they do. However, there are points of improvements for Phapros such as involving cross division in a project or certain business challenges, the obligation to share knowledge obtained through courses, training, or conferences in various forms of publication.

f Sixth Dimension: creating and maintaining a culture of continuous learning

This sixth dimension describes the extent to which organizations develop strategies and processes to obtain the knowledge assets needed by the organization through individual learning processes and organizational learning.

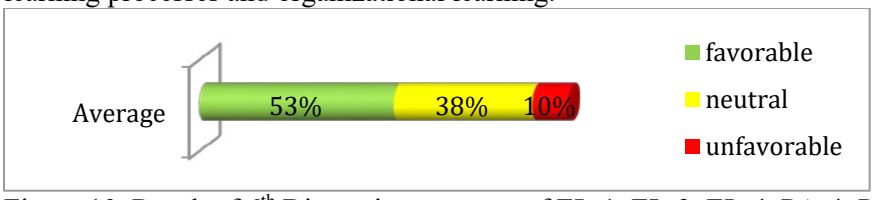


Figure 10. Result of 6th Dimension, average of EL-1, EL-3, EL-4, PA-4, PA-5

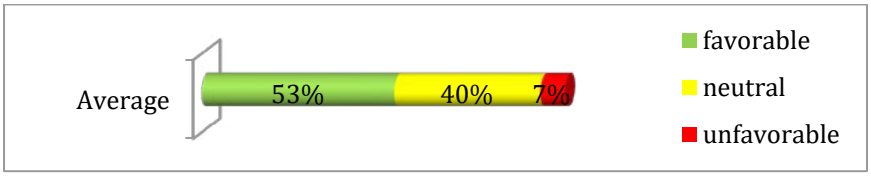


Figure 11. Result of 6th Dimension, average of SL-3, PR-3, PR-4, COP-5, TECH-1

Table 11. Quantitative survey interpretation for sixth dimension part-1

Indicators		Respondents' Answer			Interpretation	Recommendation
		favorable	neutral	unfavorable		
EL-1	Experts in their own respective fields coordinates with each other with no friction at work hours to talk about	62%	34%	4%	Moderately Favorable	Enhance
EL-3	Knows experts in the company that can be contacted when in need of facing problems or have questions	65%	29%	5%	Favorable	Nurture
EL-4	Knows experts outside of the company that can be contacted when in need of facing problems or have questions	44%	44%	12%	So-So	Early warning
PA-4	Experts or experienced employee that are experienced in working at projects are involved in newly formed team project	57%	38%	4%	Moderately favorable	Enhance
PA-5	When needed, organization involve retired experts before running projects with high risk	34%	43%	23%	Moderately Unfavorable	Some improvement needed
Average		53%	38%	10%	So-So	Early warning

Table 12. Quantitative survey interpretation for sixth dimension part-2

Indicators		Respondents' Answer			Interpretation	Recommendation
		favorable	neutral	unfavorable		
SL-3	Portal is provided to obtain and publish Best Practice or other education inside the organization	55%	39%	6%	Moderately favorable	Enhance

Indicators		Respondents' Answer			Interpretation	Recommendation
		favorable	neutral	unfavorable		
PR-3	In each project's phase, team takes time to reflect on how each phase works and how to increase the next phase's quality	59%	38%	3%	Moderately favorable	Enhance
PR-4	End reports/Project closings are made in an organized way as the last phase of project management	58%	38%	4%	Moderately favorable	Enhance
COP-5	There are benchmarking activities related to business processes in Phapros	45%	47%	8%	So-so	Early warning
TECH -1	Employees can access libraries with ease (Libraries/E-Library)	49%	39%	12%	So-so	Early warning
Average		53%	40%	7%	So-so	Early warning

Table 13 shows one indicator that has "Moderately Unfavorable" rate. Therefore, Phapros needs to pay attention to this indicator. In addition, there are also some indicators that need to be improved, such as information about experts outside Phapros, benchmarking activities, and ease of access to the library for employees.

g Seventh dimension: managing stakeholder knowledge to create value and company intellectual capital

This dimension identifies capability organization to manage organization knowledge related to the stakeholder needs and the way to fulfil that needs.

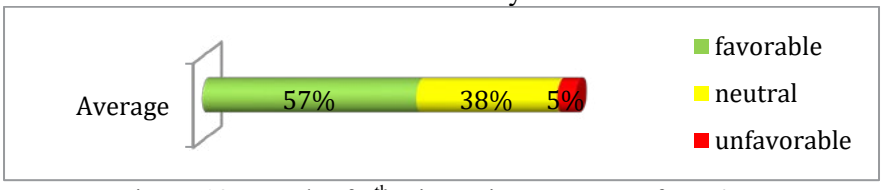


Figure 12. Result of 7th Dimension, average of SL-4, SL-5, TECH-2

Table 13. Quantitative survey interpretation for seventh dimension

Indicators		Respondents' Answer			Interpretation	Recommendation
		favorable	neutral	unfavorable		
SL-4	Company accepts criticisms and feedbacks from suppliers and customers to increases service quality	61%	35%	4%	Moderately favorable	Enhance
SL-5	Criticism and feedbacks (especially technical problems) that are received are taken in making of tools, techniques, or system to avoid repeating the same mistake	56%	39%	6%	Moderately favorable	Enhance
TECH -2	Information given by Phapros towards their employee, suppliers and customers are actual/real	56%	39%	5%	Moderately favorable	Enhance
Average		57%	38%	5%	Moderately favorable	Enhance

Table 15 shows that all indicators have "moderately favorable" rate which describes Phapros manages stakeholders' knowledge.

h Eight Dimension: managing company knowledge to generate value for stakeholders

This dimension identifies the extent of organization has strategy to manage knowledge effectively. Organization has clear direction to create organization value through utilizing and developing the knowledge owned by the organization.

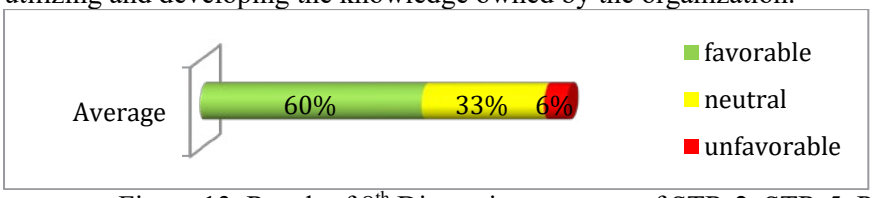


Figure 13. Result of 8th Dimension, average of STR-2, STR-5, PR-1

Table 14. Quantitative survey interpretation for eight dimension

Indicators		Respondents' Answer			Interpretation	Recommendation
		favorable	neutral	unfavorable		
STR-2	I know how to use the knowledge I have in order to increase performance and as well create value for the companies	71%	28%	1%	Favorable	Nurture
STR-5	Phapros measure knowledge as assets in currency or share of market (Example: Data related to research is not publicised for free, but it's for sale)	47%	39%	13%	So-so	Early warning
PR-1	Company considers every businesses, operations, and others as something that is correlated with each other and is considered as a whole	63%	33%	4%	Moderately favorable	Enhance
Average		60%	33%	6%	Moderately favorable	Enhance

Table 16 indicates that one indicator has "so-so" rate, in which Phapros needs to measure knowledge as assets in currency or share of market.

B. Transfer of knowledge

Transfer of knowledge was held by online meeting via zoom with the change management team champion of Phapros as the participant. The objective of this activity was to transfer knowledge regarding knowledge management framework that used in this project, then to present the knowledge management survey analysis, and to do focus group discussion regarding verification, understanding current situation, and exploring some initiatives to overcome the challenges regarding Phapros's strategic business.

C. Focus Group Discussion

After the knowledge transfer session finished, this project continued with cross-check on the survey result with the current condition of the company by doing Focus Group Discussion (FGD) with the participants by using menti meter. There were two questions asked to the participants. First, top current issues of Phapros. Second, initiatives that could identify in order to overcome the current issues.

D. In Depth Interview

In Depth Interview was held by online meeting via zoom with the Senior Leaders of Phapros as the resource person. The objective of this activity was to to present the knowledge management survey analysis, and to explore long term plan of Phapros, understanding current situations and challenges, and how Senior Leaders think and discuss strategic initiatives to overcome the challenges regarding Phapros's strategic business challenges.

E. Define Roadmap

Knowledge Management Road Map Phapros Workshop was held by online meeting via zoom with the change management team champion of Phapros as the participant. There were eleven participants in this event. They are all are the same people whom attended in transfer of knowledge event. The objective of this activity was to determine knowledge management roadmap of Phapros and indicators of success.

F. Quick win

One of quick win that can be implemented in Phapros align with CEO direction is optimizing SINAU platform or empowering people so they can share their knowledge among others through book review. It can be run by forming a community of interest in Phapros, for example Phapros Book Club. The objectives of this community is for strengthening sharing knowledge culture among people in Phapros by sharing best lesson learned or insights from reading relevant books so people can get insights from resource person who shared. Phapros Book Club consists of core teams that has their role in community, as champion, moderator, and facilitator. It should be sponsored by management so it can be supported so well in organization and people will engage with this community because supported by management. The participants of Phapros Book Club can be opened for all employees who interest to learn from book review process. Core teams will manage the governance of the community, monitor the performance, evaluate the process, and improve the performance. The results of community can be reported to management periodically. Through the results from community performance, management can give appreciation to increase motivation for people who involved as resource person, participants, and champion of champion of Phapros Book Club. This can be done in corporate event align with corporate culture internalization. This program can be linked with SINAU Platform so people can access the process of book review through learning from SINAU.

IV. CONCLUSION

After carrying out this project from the first chapter to the fourth chapter, the fifth chapter explains the conclusions obtained during the process of this project and the suggestions that can be given to Phapros for the future. Following are the conclusions:

1. Phapros strives to be a prominent pharmaceutical company.

2. Knowledge Management is essential for Phapros because tacit and explicit knowledge has to be managed in organization so knowledge of organization can be streamed and will give impact in creating culture and innovation in Phapros.
3. This project aims to help Phapros for increasing its knowledge management maturity level. This project activites conducted were knowledge management survey, transfer of knowledge, focus group discussion, in-depth interview, and Knowledge Management Road Map Workshop.
4. Quick win from the knowledge management program as follows:
    a. Phapros Book Club. The objectives of this community is for strengthening sharing knowledge culture among people in Phapros by sharing best lesson learned or insights from reading relevant books so people can get insights from resource person who shared in on-line or off-line methods or by using infographic content to be shared to people in organization.
    b. Phapros Movie Club. The objectives of this community is for strengthening sharing knowledge culture among people in Phapros by sharing best lesson learned or insights from reading relevant movies so people can get insights from resource person who shared in on-line or off-line methods or by using infographic content to be shared to people in organization.
    c. Phapros Sports Club. The objectives of this community is for strengthening harmony among people and the community can do sharing knowledge culture among people in regarding the importance of health consciousness in working and life to support their performance.
    d. Culture movement program through CEO notes. The objective is in strengthening sharing knowledge culture from top leaders in Phapros. It can increase engagement between senior leaders and employees.
    e. Using SINAU Platform to share knowledge regarding Covid-19 update through massive sozialization in Phapros. Periodic sharing to increase the body's immunity from paramedics can be done in SINAU.
    f. Phapros developed Digital transformation so system can be done paperless. In production there is a best record used in digital system. SINAU Platform also run in digital. There are some opportunity can be identified in digital collaboration program among others e-signature program, using application for working collaborative in Phapros.
    g. COGS evaluation so that Phapros can compete with competitors' products. The program was discussed are sourcing cheaper alternative raw materials, so that it can reduce the cost of material, innovation/efficiency at certain items, such as expendline. Strengthen communication across units is important so innovation program can be run collaboratively. It can be done through weekly workshop marketing, accounting, and production. Phapros has developed innovation program in production like CPOB.
    h. Phapros can increase their capability in communication so Phapros can enhance its branding. The communication can be run through social media. People in Phapros shoud be equiped by product knowledge so they can communicate well to potential customers.
    i. Phapros can manage their intellectual property by develop the system to manage it so well. It can be started by making knowledge integrator that can filter; analyze scientific, clinical, and competitive; provide the update knowledge and validate knowledge in Phapros.

After providing conclusions on this project, the following are suggestions (recommendation) given to Phapros. These suggestions are outside the scope of work of this project:

1. Phapros should set knowledge management strategy to achieve Phapros vision 2025.
2. Phapros should strengthen the strong leadership to achieve the target/ milistone of Knowledge Management in Phapros. Strong Leadership can strengthen the culture of knowledge sharing and collaboration in Phapros. Therefore, through maximizing all resources and develop nine competencies of knowledge management will make Phapros be knowledge based organization for achieving the target/ milestones.

Of course, the project that we have done has all kinds of limitations. The following are the limitations of this project:

1. This Pandemic Covid-19 made the communication run virtually. However, the collaboration is improved by using communication through Whatsapp and Zoom meeting.

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How Online Training Affects Entrepreneurial Motivation on MSMEs in Yogyakarta and Bali

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Abstract
The purpose of this study is to investigate the influence of online training which consists of instructors, participants, material, method, and purpose of training on entrepreneurial motivation of MSME participants in two Super Priority Destination—Yogyakarta and Bali. This study tests a conceptual framework using a survey data of 72 MSMEs participants and employing Path Analysis approach. The result shows there is only one variable that influences the entrepreneurial motivation of MSMEs participants, that is material. Meanwhile the other variables such as instructors, participants, method, and purpose of training do not support the entrepreneurial motivation. Material of training becomes the most important factor for online training because it is held using the LMS. Previous research have discussed regarding training and motivation, but no research discussed about online training especially its effect to the entrepreneurial motivation of the MSME actors. Therefore, this study explored more about the effect of five dimension on training on the entrepreneurial motivation. This research, however, is subject to several limitations. It only surveys the online training participants in two Super Priority Destinations—Yogyakarta and Bali. The number of participants is also limited to those MSMs that are selected by the Ministry of Tourism. This study contributed in what should be prepared for making more engaging online training materials and assistance needed to keep the entrepreneurial motivation of the MSMEs actors.
Keywords: Online training, Entrepreneurial Motivation, Instructors, Participants, Material, Method, Purpose of training

Research Background

MSMEs stands for Micro, Small, and Medium Enterprises. Even though it seems small, in fact, MSMEs significantly impact a country's economy. One of the national economic recovery efforts carried out by the government during the Covid-19 pandemic is to encourage the MSME sector, which has an important role in the national economy due to the large number of workers directly involved. The impact of the Covid-19 pandemic has not only been on the manufacturing sector, but also on the MSME sector since April 2020. Moreover, the number of MSMEs in Indonesia reaches 64.19 million, with the composition of Micro and Small Enterprises (MSE) very dominant, namely 64.13 million (99.92%) of the entire business sector. This group also feels the negative impact of the Covid-19 pandemic (Bahtiar, 2021)

In a situation of economic crisis like this, the MSME sector really needs special attention from the government because it is the largest contributor to GDP (Gross Domestic Product) and can be a mainstay in absorbing labour, substituting the production of consumer goods or semi-finished products. Moreover, amid positive sentiment that economic conditions will improve this year, the MSME sector must be able to take advantage of the current economic growth momentum to recover. Chairman of the Board of Commissioners of the Financial Services Authority, Wimboh Santoso, stated that MSMEs must be saved from the impact of the Covid-19 pandemic. This is because the MSME sector is the backbone of the Indonesian economy, with a contribution of 57.24 percent of Indonesia's total gross domestic product (GDP). So, even though the pandemic still hits, these MSME actors must still be given training, so that when the pandemic passes, they will not only survive but can run quickly to catch up.

Restrictions on community activities as an effort to deal with the Covid 19 pandemic have caused significant economic losses nationally (Hadiwardoyo, 2020). The sectors affected during the COVID-19 pandemic are transportation, tourism, trade, health, and the household sector (Susilawati et al., 2020). Meanwhile, according to the OECD (2020) and Febrantara (2020), the business sectors that have a significant impact are tourism and transportation. This situation really impacts region that rely on tourism as a source of regional income such as Yogyakarta and Bali.

During the Covid-19 pandemic, the Indonesian Government through the Ministry of Tourism and Creative Economy (Kemenparekraf) is targeting the development of a number of tourism areas in various regions including the MSMEs in those areas. Therefore, to help these MSMEs in tourism areas to survive, government do several actions. One of them is by conducting training. It is expected that by training, it can improve the MSME actors' capability in running their business. In this pandemic era, online trainings are held massively everywhere. This is because the various new regulations imposed during the COVID-19 pandemic have not yet ended, such as the rules for maintaining social distance and avoiding crowds, which are the basis for the difficulty of holding offline training. Due to the limited mobility during this pandemic, almost all activities are carried out online, one of which is the implementation of online training for MSME actors to improve the quality and potential of human resources (HR). There are some benefits of online training such as more flexible, having access to the material documentation, economical, personal learning based, etc. Some previous research findings showed that there is significant influence of training on entrepreneurial motivation (Aryadi, 2017; Purnomo, 2017, Firdaus & Hasanah, 2018). Their research focus on offline (face-to-face) training. Therefore, this research is intended to investigate how is the influence of online research on entrepreneurial motivation. It is because online training has different characteristics with offline such as it needs internet connection to access the material, it does not need to meet the instructor directly, it can be accessed anytime and anywhere.

Literature Review

Online Training

According to Dessler (2016), training is one of the efforts to increase the quality of human resources at work. Meanwhile Herdiati & Suwarsi (2019) stated that Training is related to skills and current job skills. In simple terms, training is an effort to develop skills that are carried out on humans to achieve certain standards. In the process, people who take part in the training will be given various instructions and practical directions to be able to be at the expected level.

Online training is a training conducted via internet using digital learning media/platforms that do not require face-to-face meetings at physical locations and can be done anywhere according to a predetermined schedule.

There are some advantages and disadvantages of online training as can be seen in the table 1.

Table 1. Advantages and disadvantages of online training

No	Advantage	Disadvantage
1	Flexibility – You learn at your own speed	Very low concentration level for students
2	Other participants can be from anywhere	Instructors should understand the participant's learning behaviour (since learners can be from anywhere)
3	Cheaper than offline	Participants have difficulty to follow the passion of the instructor
4	Personalization of course contents	Very low course completion rate
5	Location independent – Anyone can teach and learn from anywhere	Lack of competitive attitude makes the learning process slower

Source: https://www.corpnce.com/offline-vs-online-training/ (2021, 11 December)

For the variables of online training and indicators based on the conditions for implementation training by Dessler (2016), are as follows:

1. Instructor

Since the training is oriented to skill improvement, then the instructors who are chosen to provide training materials must really have adequate qualifications with the field, professional, and competent. There are some must-have indicator instructors include: a) appropriate with the field of knowledge, b) competence, c) experience.

2. Participants

Training participants must be selected based on certain qualifications such as whether they already have business or run a business. There are several indicators participant must have include a) competence, b) willingness to learn.

3. Material

Training Materials means books, instructions, charts, information, or programs used. The training for MSME needs material or curriculum that fits with the purpose of the training. There are several training topics given to the participants such as digital people, digital marketing, digital finance, and digital business. A set of material for each topic include video, power point slides, module, assignments, forum group discussion, and evaluation. There are some indicators such as a) the given material should be based on the participants' need, b) the material should be easy to understand or friendly user.

4. Method

Training method refers to a way or technique for improving the knowledge and skills of a person for doing assigned jobs perfectively. Therefore, there are indicators such as a) the method used is suitable with the ability of the trainees, b) the method is interesting and engaging.

5. Purpose

There are three main aims of training: Improve the individual's level of awareness. Increase an individual's skill in one or more areas of expertise. Increase an individual's motivation to perform their job well. There are some training purposes including: a) improve skills and abilities knowledge, b) improve morale, c) increase readiness in the face of change, d) increase income.

Entrepreneurial Motivation

Motivation comes from the Latin word "movere" which means to "push" or "move". The importance of motivation is because it causes, distributes, and supports human behaviour, so that people are willing to work hard and enthusiastically to achieve their optimal results (Hasibuan, 2005 in Purnomo, 2017). Motivation is the energy that moves and directs a person's activities and can be a goal and a tool in learning as well as related to interests. Motivation can be internal, which means that it comes from itself; can also be external, namely from teachers, parents, friends and so on (Tyka, 2007 in Purnomo, 2017).

In other word, motivation is a state in a person's personality that encourages individual activities to carry out certain activities to achieve a goal (Aryadi, 2017). The motivation can also be given to the people to make them more motivated and interested in entrepreneurship. According to Firdaus & Hasanah (2018), entrepreneurship is a creative and innovative ability that is used as the basis, tips, and resources to find opportunities for success. The essence of entrepreneurship is the ability to create something new and different (create a new and different) through creative and innovative thinking processes. Entrepreneurial motivation is characterized by high needs to be fulfilled, willingness to take risks, strong self-confidence, and willingness to do business. From some of these opinions, it can be concluded that entrepreneurial motivation is the desire and encouragement of individuals to fulfil their needs and willingness to do business or entrepreneurship.

Referring to the results of research by Wijaya and Winargo (2016), there are eight factors that motivate people to become entrepreneurs. The eight factors include:

1. Encouragement of economic success, with the following indicators: a) a. building a successful business, b) earn more income, c) become a business owner, d) doesn't work for other people, e) earn income
2. Previous job dissatisfaction, with the following indicators: a) insufficient previous income, b) been refused/ rejected to get a job several times, c) can't find another job, d) getting discriminatory treatment
3. Confidence in personal abilities, with the following indicators: a) challenging work, b) seeing the extent of the abilities possessed, c) take advantage of business opportunities, d) using talents as optimally as possible.
4. Self-esteem, with the following indicators: a) get recognition for achievements, b) appreciated by the community for what you do, c) desire to innovate
5. Social responsibility, with the following indicators: a) helping others with new jobs, b) meet the needs of life, c) life is more useful by helping others

6. Freedom to manage the business, with the following indicators: a) freedom to set the time, b) freedom from being controlled by others
7. Likes to do work, with the following indicators: a) doing the job you like, b) b. do the job you want
8. Model, with the following indicators: a) a. following the example of people you admire, b) continuing the family tradition

Based on the literature review above, the theoretical framework can be drawn as follow:

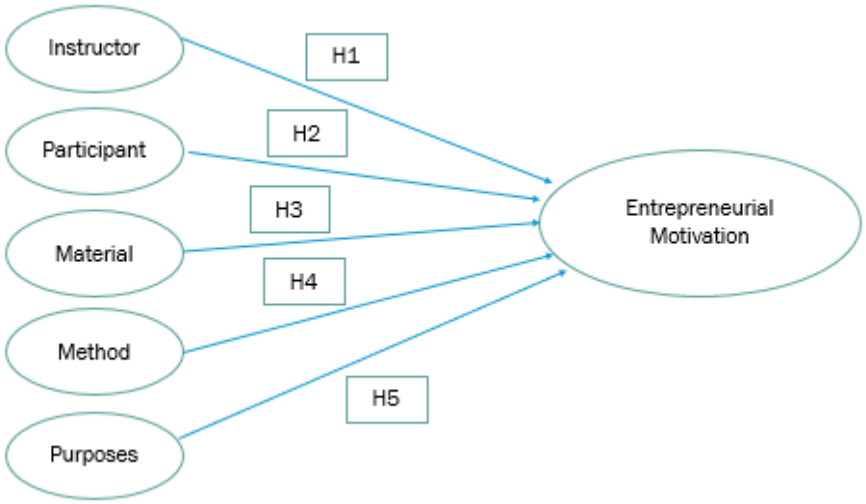

Figure 1. Theoretical Framework

Methodology

This research is quantitative research that emphasizes on testing theories through measuring research variables with numbers and statistical tests are carried out. Quantitative research is used to determine the relationship between the independent variable and the dependent variable in a study and how much influence it has with the aim of testing the established hypothesis (Sugiyono, 2017). The collected data were further analysed using descriptive analysis and PLS-Structural Equation Modelling (SEM) using WarpPLS version 7.0. The population in this study were all MSME participants who were selected after going through a selection process from the ministry of tourism as many as 100 people who came from 2 tourism destinations—Yogyakarta and Bali. From 100 population, only 72 respondents filled the questionnaires.

Findings and Discussion

From the data collected, the characteristics respondents can be seen as follow:

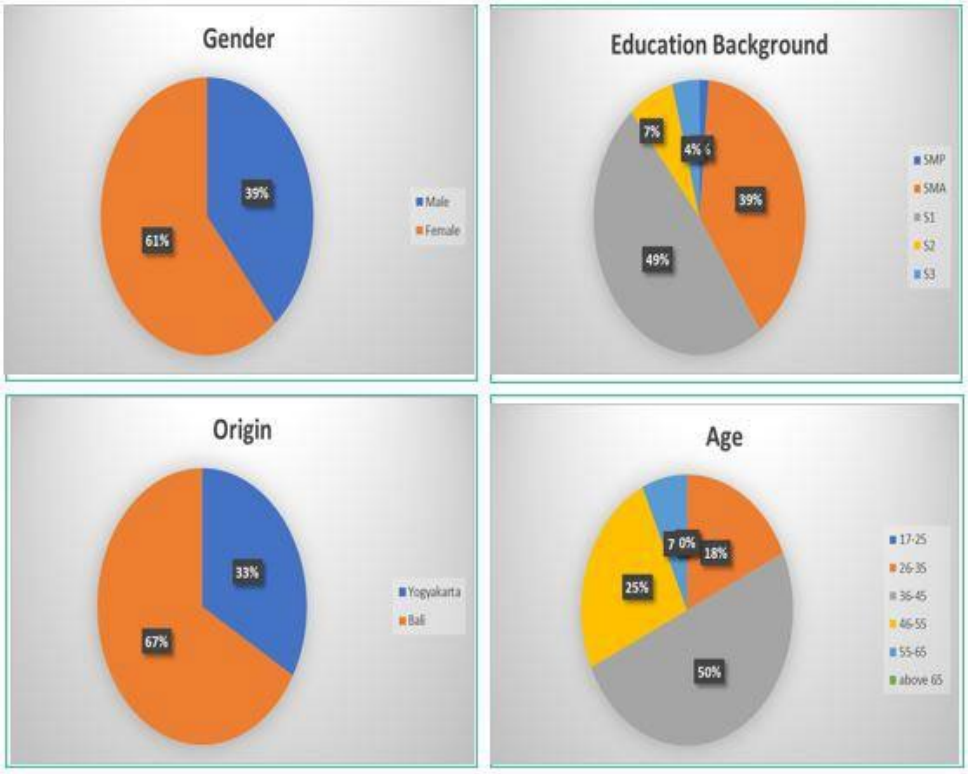

Figure 2: Characteristics of Respondents

As we can see here that characteristics can be explained from these four categories; first, gender; second origin of place, education background, and age. For gender, male is 39% and female 61%; from origin, respondents from Yogyakarta is 33,3% and respondents from Bali is 66,7%; based on age category, 50% is at range of age 36-45 years old; 25% is at range 46-55 years old; 18% is at range 26-35 years old; and 7% is at range 55-65%; education background of the respondents, 48,6% of the total respondents is graduated from bachelor degree, 39% is graduated from senior high school; 7% is graduated from master degree; 4% is graduated from doctoral degree; 1,4% is graduated from junior high school. So, we can conclude that majority of the respondents has a good educational background.

To validate the measurement model, convergent validity and discriminant validity were assessed. Convergent validity assesses the degree to which a measure is highly correlated with alternative measures measuring the same construct (Hair et al., 2014). Discriminant validity ensures that a construct measure is empirically unique and represents phenomena of interest that other measures in a structural equation model do not capture (Hair et al., 2010). In this study, all the constructs were modelled as reflective construct; hence, the indicators should share a high proportion of variance (Hair et al., 2014). Indicator reliability (outer loadings) and average variance extracted (AVE), and individual reliability (CR) as shown in Table 2 were examined to assess convergent validity. The loadings of most of the items were above the threshold value of 0.4. Seventeen items (Plthn4, Wir4, Wir5, Wir6, Wir9, Wir10, Wir13, Wir14, Wir15, Wir16, Wir17, Wir20, Wir21, Wir22, Wir23, Wir24, Wir25) were deleted because their loadings were less than the 0.4 (Hair et al., 2014). AVE values were all above 0.5, confirming the convergent validity (Hair et al., 2010; Henseler et al., 2009). Next, composite reliability (CR) was applied to assess the reliability of the measures, as it prioritizes the indicators based on their individual reliability. All the values of composite reliability CR were greater than 0.7 indicating that the measures were reliable. Hair et al. (2014) suggest that Cronbach's alpha estimates the reliability based on inter-correlations of variable's indicator whereas, composite reliability is based on the individual indicators.

Table 2. Summary of Validity and Reliability of All Variables

Variable	Sub Variable	Item	Items Deleted	Factor Loading	AVE	CR
Online Training	instructor	Plthn1	Item Plthn4	0.976	0.953	0.976
		Plthn2		0.976		
	Participant	Plthn3		1.000	1	1
	Material	Plthn5		0.890	0.792	0.884
		Plthn6		0.890		
	Method	Plthn7		0.958	0.918	0.957
		Plthn8		0.958		
	Purpose	Plthn9		0.903	0.815	0.898
		Plthn10		0.903		
Entreprenerial Motivation		Wir1	items no 4, 5, 6, 9, 10, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25	0.568	0.517	0.895
		Wir2		0.788		
		Wir3		0.715		
		Wir7		0.803		
		Wir8		0.749		
		Wir12		0.674		
		Wir18		0.732		
		Wir19		0.697		

The discriminant validity was assessed by comparing the square root of the AVE values with the correlations of latent variables (Hair et al., 2014; Fornell and Larcker, 1981). As shown in Table 3, the square roots of AVE for each construct were higher than the correlation for other constructs in this research, confirming the discriminant validity of the constructs.

Table 3. Discriminant Validity

Variables	1	2	3	4	5	6
Instructor	*0.976*					
Participants	0.531	*1.000*				
Material	0.757	0.465	*0.890*			
Method	0.806	0.439	0.780	*0.958*		
Purpose	0.786	0.479	0.718	0.798	*0.903*	
Entrepreneurial Motivation	0.027	0.085	0.189	0.202	0.217	*0.719*

For hypothesis testing, structural model was assessed to evaluate the relationships between the variables. As shown in Table 4, direct effect of Training Material ($b = 0.210$, $p < 0.030$) on Entrepreneurship motivation is significant and positive. Thus, H3 is accepted. Unfortunately, the direct effect of Instructor, Participants, Training Method and Purpose are positive but not significant. Thus H1, H2, H4, and H5 are rejected. The R2 value of 0.008 suggests that only 8 per cent of the variance in Entrepreneurship can be explained by Instructor, Participants, Training Material, Training Method and Purpose.

Table 4. Hypothesis Testing

Hypotheses	Direct Effect	Path Coefficient	Standard Error	t-value	Decision
H1	Instructor→ Entrepreneurial Motivation	-0.100	0.114	0.192	Rejected
H2	Participants → Entrepreneurial Motivation	0.102	0.114	0.187	Rejected
H3	Material → Entrepreneurial Motivation	0.210	0.110	0.030	Accepted
H4	Method → Entrepreneurial Motivation	0.041	0.116	0.364	Rejected
H5	Purpose → Entrepreneurial Motivation	0.027	0.117	0.409	Rejected

The result shows there is only one variable that influences the entrepreneurial motivation of MSMEs participants, that is material. Meanwhile the other variables such as instructors, participants, method, and purpose of training do not support the motivation. Material of training becomes the most important factor for online training in which it is held using the LMS. Since the training uses less interaction, as the material developer, it should be kept in mind to develop material that is interesting, easy to understand, simple, create learners' engagement to follow the training, create learners' curiosity to learn more and keep learners' motivation. Hence, the research result also can be used to evaluate the success of online training from learners' perspectives. This evaluation can provide a fast and early feedback for training developer and to take corrective actions if necessary for improvement to keep the motivation of the learners.

There are several things that can be done to make the material effective. Since giving material is not just conveying material and the participants only listen and taking notes, but the learning process must be able to make learning easy to understand by participants of online training. For example, during training, the process can be combined with games such as providing quizzes link by using Kahoot! (It is one of the most widely used game-based learning applications in the world) or Thinglink (It is web service that allows users to create image channels, where they can tell their stories using images with video, music, and text. ThingLink is like YouTube photo sharing, with features that make it possible to create interactive images such as animated PowerPoint Presentations, evaluation at the end of the lesson, and collaboration between participants by asking questions related to the material that has been taught by using group forum discussion.

In addition, there is an Open-Ended Learning (OEL) model that is used by utilizing examples of related problems in learning materials. Then participants are given the opportunity to find out what the best formula is to solve the example problem. Besides that, the participants should know how to utilize technology, understand it, and be able to implement the use of Learning Machine System (LMS).

In the online training, internet connection is still the main issue. There are some cases that participants complain because of poor connections, so that learning becomes hampered. Visual display is also important. Video by using animation is more effective than the instructor talks all the time in the video. As the material developer, it is also important to create a comfortable learning atmosphere such as empowering the participants to be active in forum group discussion, providing challenging activities to boost the learning process.

Besides that, providing assistance for the MSME actors is also important to keep their entrepreneurial motivation. Some obstacles still can happen to make the online training does not run smoothly. As mentioned before, such as internet connection, the IT literacy in using the LMS, do not understand the terms used in the slides, etc. All of them can decrease the motivation to learn and improve themselves to be good entrepreneurs. With better technological literacy, MSME entrepreneurs can carry out their work more effectively and efficiently so that it also increases the entrepreneurial motivation of MSMEs (Muizu & Budiarti, 2017).

Other than material in LMS, it is also important to provide helpdesk or in a certain time, the participants can directly talk to the instructor to discuss thing they do not understand. It can be through WhatsApp, Telegram, or other media. This is in line with the result of Maryati's research that is to provide guidance, assistance and be given motivation to continue making efforts to develop their production. The follow-up to this program is also carried out on a regular basis monitoring and evaluation, for participants who are already independent to provide reports on their business developments. This needs to be done to maintain the entrepreneurial motivation of MSMEs.

Conclusion and Suggestions

From five variables of online training, material is the only variable that influence the entrepreneurial motivation. Therefore, it is very important to make the material as the interesting and engaging as possible. Only eight per cent of the variance in entrepreneurial motivation can be explained by instructor, participants, material, method, and purpose. It means that there are still many factors that can influence entrepreneurial motivation that has not been explained in this research. Therefore, there are opportunities to study further related to entrepreneurial motivation.

Limitation

There are some limitations in this research:

1. This research is limited only to 2 tourism destinations which are Yogyakarta and Bali.
2. The participants are limited only the MSME participants who passed the selection from Ministry of Tourism, which are 72 people.
3. The variables that are used in this research are only limited to training and entrepreneurial motivation.

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Momentum Driven, Return and Sentiment Investor Analysis on Social Media

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Abstract

This study aims to see the effect of momentum-driven and stock return on microblogging sentiment investors. Investor who have information with limited transaction such as indivual investors have desire to post messages about the shares they are trading and twitter is one that is used in this case. To analyze sentiment investors on Twitter, we classified sentiment using the phyton text mining algorithm and Naïve Bayesian text classification into level bullish, bearish, and neutral from 2015 to 2020 on 68 listed companies on the Indonesia stock exchange. With 10532 data we used Vector Autoregression and Impulse Response to capture short and long-term impacts along with a causal relationship. We found that microblogging sentiment investor has a significant impact on momentum-driven and stock return but not vice-versa. There's no causal relationship between momentum driven and stock return. Also, the response due to shocks between microblogging sentiment investors, stock return, and momentum-driven are convergent.

Keywords: Sentiment Investor, Return, Momentum-Driven, Naive Bayesian, Vector Autoregression.

JEL Classification: [C58, G11, G41]

Introduction

Behavioral finance is a research area that applies psychological theory and financial models to explain markets anomalies (Shiller, 2003) and analyzes investor behavior and its impact on the capital market from a psychological point of view (López et al., 2019). In its development, Pompian (2006) examines two approaches, from a micro and macro point of view. The financial behavior bias of individual investors distinguishes them from rational investors described in classical economic theory and behavioral finance from a macro point of view which is used to detect and describe anomalies inefficient market hypothesis described by behavioral models. Investor Sentiment is one of the research areas in the behavioral finance theory that analyzes investor sentiment and how it affects stock market activity. Many previous studies have tried to prove whether sentiment affects asset values at market prices. But to quantify emotions and make observations on each individual is not easy, so technology is needed. Recent research shows that information technology penetration is the main driver of the significance of investor sentiment on financial markets, even sentiment appears to be strong information and captures information that is usually attached to other market variables related to sentiment such as volatility (Petit et al., 2019). Social media is a platform that is used to express emotions to the public and has a great influence on the overall public opinion (Sahana & Anuradha, 2019). Communication built on social media platforms is considered to be able to capture investor sentiment, both positively and negatively, which has an impact on the capital market. Social Media sentiment has predictive value on stock prices both using google insight (Mao et.al, 2011; Sahana, 2019), yahoo finance which helps predict market volatility (Antweiler and Frank, 2004), twitter can predict the stock market (Sprenger et al., 2014; Pagolu et al., 2016; Sul et al., 2016; Sahana et al., 2019). Also Constantinos Antoniou, John A. Doukas, and Avanidhar Subrahmanyam (2013) in their study consider whether sentiment affects the probability of a momentum strategy as well as Hong and Stein (1999) argue for establishing a relationship between sentiment and momentum. From the description above, the purpose of this study

is to find out the relationship between momentum-driven, stock return and sentiment social media investors in Indonesia.

Literature review

Sentiment Investor and Stock Return

Investor sentiment can be defined as investor optimism/pessimism about future stock market activity (Baker & Wurgler, 2006). When investors make decisions, their sentiment, or state of mind, influences a decision (Blajer-GołeRbiewska, Wach, & Kos, 2018). It is a way for investors to build trust (Barberis et al., 1998). Conversation allows the exchange of information, opinions and emotions very quickly (Nofsinger, 2005). This process is considered to be very important for the stock market and investment. Investors can seek information and expert opinion from social media such as twitter or institutional investors can form groups to share investments or analysts communicate with executives, managers and they form local groups and associations to interact with each other (Bar-Haim et al., 2011). Another study revealed that information about investment will spread through the environment through word of mouth (Ivkovic et.al, 2005). Information diffusion appears to be stronger in more social countries, suggesting residents are more comfortable seeking advice from others. Using social media is a new way of communicating, investors communicate with each other through message forums such as Twitter. Sprenger et.al (2014), argues that tweets can be optimistic or optimistic about stock in the stock market or can also show differences of opinion in it so it is found that tweet sentiment is positively related to stock returns. Positive sentiment on tweets is associated with positive returns (Zhang et al., 2011). It seems that investor talk is turning to the social media environment. One reason is easier access to experts (Bar-Haim, 2011). Kietzmann et al. (2011) build a social media framework and divide it into seven groups and the most important of them are sharing and conversation because these two things are big data sources. Social media users lead conversations in various forms such as Facebook "comments" or Twitter "tweets," and they can share them with others. Such data can be collected and analyzed further. In the capital market field, social media data is applied to reveal deeper insights, trends, and associations between society and the capital market (Bukovina, 2016). Sentiment analysis or data mining describes various computational techniques that are focused on finding, extracting, and filtering human emotions, feelings, or opinions from textual information in web content towards certain entities (Fang and Zhan, 2015). However, Das and Chen (2007) stated that there is no predictive relationship between bullish messages and market returns in yahoo finance boards. Because according to Sprenger et al (2014), there is a positive relationship between bullishness and tweet returns, message volume and trading volume

Sentiment Investor and Momentum

Momentum is a strong anomaly where stocks with low returns during the previous year tend to have low returns for the next few months and stocks with high past returns tend to have high future returns (Jegadeesh and Titman, 1993). Some studies argue that momentum is due to continued overreaction from investors and momentum due to a lack of reaction to news (Hong and Stein, 1999). Constantinos Antoniou, John A. Doukas, and Avanidhar Subrahmanyam (2013) in their study consider whether sentiment affects the probability of a momentum strategy as well as Hong and Stein (1999) argue for establishing a relationship between sentiment and momentum. good or bad news among stocks that gain or lose will spread slowly when there is an optimistic or pessimistic sentiment that will eventually lead to momentum. Momentum arises from underreaction to new information on the market and emotional excitement in the subconscious itself has momentum. Emotional finance views momentum as possibly related to the need to idealize well-performing stocks (which have gone up previously), and demonize underperforming stocks (which have fallen in value).

Hypotheses

Based on research conducted by Bukovina (2016), which states that in the field of capital markets, social media data is applied to reveal deeper insights, trends, and associations between society and the capital market. We will look at the causal relationship between the variables between sentiment

in social media Twitter and the capital market. Recent research describing the relationship between local daily happiness sentiment extracted from Twitter and stock returns indicates interdependence between online activities and the stock market (Zhao, 2020). And also, according to Hong and Stein (1999), there is a relationship between sentiment and momentum. Moreover, also to see the shocks caused by sentiment investor, momentum-driven, and return on the stock market due to lack of researches in this area in Indonesia, we propose the following hypothesis:

H1: Sentiment have a relationship with momentum-driven and returns on the capital market.

H2: Sentiment investor, momentum-driven, and return on the capital market have a causal relationship.

H3: The shocks sentiment investor, momentum-driven, and returns on the capital market are convergent.

Methods

Data Set

We used sentimen investor form twitter, we conducted a message classification approach in line with the Naïve Bayesian classification method and research indicated by (Sprenger et al., 2014). Daily messages or opinions are taken from the social media platform Twitter based on #stockcode, which are listed on the exchange consisting of 60 active stock codes biggest market capitalization taken from 2015– 2020. Consist of a) Mining Industries (11 stock codes); Basic Industry And Chemicals (11 stock codes); c) Consumer Goods Industries (9 stock codes); d) Finance Industries (7 stock codes); e) Trade, Services & Invesment (7 stock codes); f) Infrastructure, Utilities And Transportation (5 stock codes); g) Property, Real Estate And Building Construction (5 stock codes); h) Miscellaneous Industry (4 stock codes); and i) Agricalture (1 stock codes).

The method used in retrieving opinion data from Twitter uses an approach (Oh & Sheng, 2011) which consists of five steps (1) Downloading data, (2) Pre-processing, (3) Sentiment Analysis, (4) Prediction Classification, and (5) Evaluation and Analysis. After Data Cleansing was performed, the number of opinions about 10532 tweets with 558 usernames. data is entered into the Naïve Bayesian model, consisting of 80% training data, namely 8,426 data and 20% testing data of 2,106 data. In addition to using the text classification method using a manual training set, in this study we also use the approach taken by Sprenger et al. (2014) by manually labeling the entire message.

The financial data used were taken from Januari 2015 – Mei 2020 using daily data. In this study we use dailiy stock return the calculations used in this study are based on simple return calculations, namely as follows:

$$Return = \frac{Rt + 1 - Rt}{Rt}$$

Rt is the return in a certain period or stock return for one period in the future. Stock return calculation is the difference between the stock price periode + 1 and the current stock price divided by the stock price. Opinion on Twitter, momentum-driven are calculated based on each stock code. And for For momentum-driven calculations, we use the approach taken by Grinblatt et al. (1995),with the following calculations:

$$Mt = \sum_{i=1}^{n} \frac{ait - cft.(Ait/\sum_{j=1}^{n} Ajt}{\sum_{j=1}^{n} Ajt} .(ri,t-k-rp.t-k)$$

where n = number of asset classes, ait = net purchase of asset class i in period t, Ait = total value of asset class i at the beginning of period t, cft is net cash inflow, ri,t = the yield on asset class i (capital gains), and rp.t = the yield on the whole portfolio.

Model Spesifications

To prove the research hypothesis raised by the researcher, the VAR (Vector Autoregressive) model approach is used to capture short-term and long-term relationships. Causality test is used to see the relationship between variables using the Granger Causality test. So based on the literature that has been discussed previously. The model proposed by this research is as follows:

Sentiment Investor = *f{Momentum-Driven, Return}*
Momentum-Driven = *f{Sentiment Investor, Return}*
Return = *f{Momentum-Driven, Return}*

For the definition of variables can be seen in the table below:

Variable	Definition
Sentiment Investor	Bullish, Bearish and Neutral Daily Signal From Twitter
Momentum-Driven	Net purchases to revaluations
Return	Stock Return in a certain period

Results

To see stationary data, we used root test using the ADF (Augmented Dickey-Fuller) method, and all data are considered stationary at the level $\alpha < 0.01$, $\alpha < 0.05$, and $\alpha < 0.10$ provided that the absolute value of the F-statistic is < critical value. The VAR model generated in this study based on optimal lag to to answer the first hypothesis in this study can be seen in Table 1, it can be concluded that in a first model where sentiment investor as a dependent variable, return t-1 has a direct relationship with the sentiment in period t but has an opposite relationship in return t-2 period. While momentum-driven has an opposite relationship in t-1 periods but the direct relationship in t-2 periods with sentiment investor. Sentiment investor in period t−1 and period t−2 has a direct relationship with a sentiment in period t, this shows that sentiment in the previous period has an influence on investor sentiment in period t because according to pompian (2011), investors tends skeptical about new information and gradually update their information.

Table 1. VAR Model

	Dependent Variabel						
Variable	**SI**	**RETURN**	**M**	**Variable**	**SI**	**RETURN**	**M**
SI(-1)	0.348296	-9.75E-05	-0.026067	M(-1)	-0.003016	0.000369	0.114594
	(0.00929)	(0.00039)	(0.03828)		(0.01116)	(0.00046)	(0.04603)
	[37.5084]	[-0.25302]	[-0.68091]		[-0.27014]	[0.79555]	[2.48974]
SI(-2)	0.315054	0.001735	0.184273	M(-2)	0.007359	0.000423	0.059982
	(0.00928)	(0.00039)	(0.03828)		(0.01116)	(0.00046)	(0.04603)
	[33.9318]	[4.50177]	[4.81397]		[0.65915]	[0.91290]	[1.30317]
				C	**0.307848**	**0.000853**	**0.122135**
RETURN(-1)	0.104265	0.034408	-4.232.327		(0.01128)	(0.00047)	(0.04651)
	-110.976	(0.04606)	-457.518		[27.2888]	[1.82179]	[2.62609]
	[0.09395]	[0.74697]	[-0.92506]	**R-squared**	**0.331755**	**0.012330**	**0.013413**
RETURN(-2)	-0.618873	0.017893	0.355781				
	-110.979	(0.04606)	-457.531				
	[-0.55765]	[0.38842]	[0.07776]				

Table 2. Granger Causality

Null Hypothesis:	F-Statistic	Prob.
RETURN does not Granger Cause SI	1,6102	0,2045
SI does not Granger Cause RETURN	6,2096	0,0127
M does not Granger Cause SI	1,7236	0,1893
SI does not Granger Cause M	4,6961	0,0303
M does not Granger Cause RETURN	0,6945	0,4047
RETURN does not Granger Cause M	0,7639	0,3821

To answer the second hypothesis in this study can be seen in table 2, it can be concluded that investor sentiment have-one causality relationship where investor sentiment has a significant effect on stock

returns but not vice versa at the significance level $\alpha < 0.05$. These results support research conducted by Zhao, 2020 which states that there is an dependence between online activities and the stock market. Likewise, the relationship between investor sentiment and momentum-driven both has a one-way causal relationship but not vice versa. In other words, it can be concluded that investor sentiment has a significant influence on momentum-driven with a significance level of < 0.05. The results of this study support previous research conducted by Constantinos Antoniou, John A. Doukas, and Avanidhar Subrahmanyam (2013) and Hong and Stein (1999). In addition, there is no causal relationship between stock returns and momentum-driven and vice versa on the capital market in Indonesia.

Table 3. Impulse Response

Period	Response of SI:RETURN	Response of SI:M	Response of RETURN: SI	Response of M:SI
1	0.000000	0.000000	0.002380	0.217898
2	-0.005995	-0.002022	8.73E-05	-0.005123
3	0.000526	0.004023	0.001442	0.147526
4	-0.001902	0.001065	0.000534	0.051007
5	-0.000250	0.001775	0.000687	0.069481
6	-0.000676	0.000968	0.000411	0.040674
7	-0.000295	0.000903	0.000363	0.036439
8	-0.000314	0.000620	0.000256	0.025543
9	-0.000201	0.000501	0.000204	0.020406
10	-0.000169	0.000370	0.000152	0.015154

If seen from table 3, it can be concluded that the shocks that occur in investor sentiment towards stock returns and momentum-driven are convergent, meaning that the shocks that occur in investor sentiment will gradually disappear. Likewise, shocks that occur in stock returns and momentum driven investor sentiment in the first month will decrease but shocks will increase in the third month and again decline to zero. So that the shocks that occur in investor sentiment, stock returns and momentum driven have no permanent effect. The above results also answer the third hypothesis of this study.

Conclusion

There is a relationship between investor sentiment on Twitter with stock returns and momentum driven on stocks from biggest market capitalization stock in Indonesia. The investor sentiment used in this study has a significant influence on stock returns and is momentum driven, this shows that there is a relationship between online activities and the stock market (Zhao, 2020). And if there is a shock between investor sentiment, stock returns and momentum driven, the shock will not be permanent or convergent.

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Regime-switching regression for inferring the effect of the Hang Seng, S&P500, and SET indices on the Jakarta Composite Index

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Abstract
This study aims to make inferences about the effect of the Hang Seng (Hong Kong), S&P500 (United States) and SET (Thailand) indices on the Jakarta Composite Index. Data analysis was performed by means of Hidden Markov Model (HMM) regression due to the randomly fluctuating characteristics of the data and carried out using regime-switching models with two hidden regimes or states, the synchronization state where the correlation between the variables significantly different from zero, and desynchronization state where the correlation variables is not significant. The results showed that in the period between January 2016 to December 2020, the synchronization state was more dominant, where the probability of the synchronization state was higher than that of the desynchronization state. This means that during the research period the chance of being in the synchronization state was very high with the minor exception in the March and April of 2020 when the COVID-19 pandemic started to make impact all over the world
Keywords: market index, regime-switching, Hidden Markov Model, synchronization state, desynchronization state

Introduction

Predicting and forecasting the value of an asset has always been the foals of investors and researchers alike. Investors need to have an accurate prediction of asset value for the time being and also the future value of the asset so that they can make profitable investment. Researchers need to understand the market more. There are many types of asset value prediction which can be classified into two main methods: value based on fundamental analysis and value based on technical analysis. Technical analysis is uses series of past prices to predict and forecast the value of an asset at a certain time in the future. Of the popular methods in valuing an asset using series of past prices, one can also predicts and forecasts asset values using time series analysis – a series of data points collected in time order – either on stationary time series using past prices (autoregressive models), past errors (moving average models), or using both past values and past errors (autoregressive moving average models), and can also be done with a nonstationary time series with a constant volatility (autoregressive integrated moving average models) or time-varying volatility (autoregressive conditional heteroscedasticity models). The problem with those models is they did not count for outside forces such as macroeconomic forces, policies, or regulations, among others, that can happen and cause a drastic change in the time series behaviour.

Markov Switching models (also called Regime Switching models) as introduced by Hamilton (1989) considers the change in conditions as unobservable variables which is called states and so separates the time series into different states based on the change in the time series behaviour. Since its introduction, Markov Switching model has been used in many forms and many fields such as economics (Asymmetrical behavior over GDP expansions and recessions, (Hamilton 1989); Exchange rates (Engel and Hamilton 1990); Interest rates (García and Perron 1996); Stock returns (Kim et al. 1998), epidemiology: Incidence rates of infectious disease in epidemic and nonepidemic states (Lu et al. 2010), and psychology: manic depressive states (Hamaker et al. 2010).

This paper aims to make inferences about the effect of the Hang Seng (Hong Kong), S&P500 (United States) and SET (Thailand) indices on the Jakarta Composite Index. There are two states: synchronization state, where the movement of the Jakarta Composite Index is in synchronization with the other three indices (e.g., the Jakarta Composite Index goes up/down if the other three indices went up/down), and the desynchronization state where the movement of the Jakarta Composite Index is not in synchronization with the other three indices.

Literature Review

Stock market comovements

The stock markets, considered the barometers of the economies get affected by economic fundamentals and the global economic shocks. Globalization has caused the increasing of international capital flow among the markets, therefore causing different markets affect each other's performance, in which, a movement in one market may cause a movement in another market, commonly known as comovement, or markets "move together". Market comovement is an important topic in finance. The knowledge of market comovement may help in asset allocation, portfolio diversification, risk management and functioning of financial system (Jach, 2017). Eichengreen et al. (1996) identified channels of contagion in foreign exchange markets in which they stated the role of trading linkages between countries and speculative attacks on the international competitiveness of the countries. According to Forbes and Rigobon (2002) there are three different mechanisms of international shock propagation: (i) aggregate shocks which affect the economic fundamentals of more than one country; (ii) country-specific shocks which affect the economic fundamentals of other countries; (iii) shocks which are not explained by fundamentals and are categorized as pure contagion. Bekaert et al. (2014) examined six different categories of international information transmission channels: (i) international banking sector links at the country level; (ii) country-specific policy responses to the crisis; (iii) trade and financial linkages; (iv) information asymmetries and informational flows; (v) domestic macroeconomic fundamentals; (vi) "investor contagion" caused by herding behavior. Some of the quantitative measure that has been used to measure stock market comovement are: cross-correlation, regression coefficient, quantiles, tail-dependence coefficient, copula, TailCoR (Ricci and Veredas, 2015), time series models (bi or multivariate, linear or nonlinear – uni- and multivariate GARCH, VAR, copula) (Rodriguez, 2007), regime switching (Gallo and Otranto, 2008) and latent component (Berger and Pozzi, 2013).

Horvath and Poldauf investigated the stock market comovements in 11 countries, both at the market and sectoral level in 2000-2010 using multivariate GARCH models. Their results showed that the increasing correlation among equity returns during the financial crisis (2008-2010), suggesting that the crisis represented a common shock to all countries Gjika, Dritan, Roman Horváth (2013) examined time-varying stock market comovements in Central Europe. They used daily data from 2001 to 2011 and employing the asymmetric dynamic conditional correlation multivariate GARCH model, they found that the correlations among stock markets in Central Europe and between Central Europe vis-à-vis the euro area are strong and increasing over time, particularly after their EU entry and largely remained strong during the financial crisis Jach (2017) quantified time-varying, bivariate and multivariate comovement between international stock market returns, across various time scales, based on a novel approach called thick pen transform developed by Fryzlewicz and Oh (2011). The results showed various level of comovements between those countries Younis et al. (2020) assessed stock market interrelationship in emeriging Asian countries which comprise most of the East Asian, and Southeast Asian emerging economies with special focus on China for past decades during which different crisis occurred. Their findings showed comovement patterns of higher frequencies during the crises periods of 1997, 2008 and 2015. They found that the strength of dependency among the countries increased in the crisis periods, with the implication of increasing short- and long-term benefits for the investors since it may have an effect on the Value at Risk levels of a multi-country portfolio. They also found that the stock market of China shows a high correlation with the other six Asian stock emerging markets in both high and low-frequency spectrums which showed the association of the south and east Asian stock market with Chinese and furthermore showed the interconnection of the south and east Asian countries' economies with the China's economy since past two decades. They conclude that the findings are useful for investors, portfolio managers and the policymaker around the globe Zehri (2021) studied how the COVID-19 pandemic shock has harmed the US and East Asian stock markets. The results showed a large spillover effect from the US to stock returns of East Asian (China, Japan, Hong Kong, and South Korea) markets which became stronger in the COVID-19 period in comparison to the tranquil period.

Hidden Markov Models

A hidden Markov model (HMM), introduced by Baum and Petrie (1966), is a probabilistic model that can be used to model a sequence of observations. Using Hidden Markov Model (HMM), the system being modeled is considered a Markov process with hidden or unobserved states. A Markov process, or Markov chain, is a stochastic model describing a sequence of possible events in which the probability of one event depends only on the state attained in the previous event. In many cases, the chain is hidden or invisible, and only 1 out of every *k* observations randomly generated by the state is visible. The model has the following main assumptions (Baum and Petrie, 1966): (i) an observation at t was generated by a hidden state (or regime), (ii) the hidden states are finite and satisfy the first-order Markov property, (iii) the matrix of transition probabilities between these states is constant, (iv) the observation at time t of an HMM has a certain probability distribution corresponding with a possible hidden state. Park et al. (2009) proposed a new method to overcome the uncertainty in the forecasting of financial time series by projecting the change of direction (*up* or *down*) of next day's closing price of financial time series using the continuous Hidden Markov Model. They showed using experiments that their method was able to effectively forecast the change directions of financial time series having dynamic characteristics

Markov-Switching Regression Models

Markov-Switching Regression Models are models for time series that transition over a set of finite states. In this model, the states are not directly observable, and their existence is known by symbols that they produce throughout the sample. The time of transition between states are random as and the duration in a particular state and the transitions follow a Markov process. The parameters of the data generating process vary over a set of different unobserved states. The current state of the data generating process is not known but the probability of each possible state can be estimated. The Markov-Switching Regression is being used in many fields. In epidemiology, for example, Lu et al. (2010) studied the incidence rates of infectious disease and use epidemic and nonepidemic condition as the states while in psychology, Hamaker et al. (2010) used Markov-Switching Regression Model to study manic depressive states. The use of Markov-Switching Regression Model in economic and finance are extensive. For example, Hamilton (1989) studied asymmetrical behavior over GDP using expansions and recessions as the states and found periodic shift from a positive GDP growth rate to a negative GDP growth rate ; Engel and Hamilton (1990) studied the rise and fall in the value of dollars in a long term in which they found that exchange rate does not follow random walk with the implication of long swings in the value of dollars (rise and fall of dollar value in a long term); Kim et al. (2008) studied the synchronization and desynchronization states between Japanese Yen and the floating East-Asian currencies and found "evidence of synchronization between the Swiss-franc exchange rates of floating East Asian currencies and the Swiss-franc–Japanese-yen exchange rate over the period 1999–2006"; Garcia and Perron (1996) analysed the real interest rate under regime shifts in which they used ex-post real interest rate, inflation rate, and ex-ante real interest rate and expected inflation as the states. They found that "ex-ante real interest rate as essentially constant with the crucial difference that the mean of the series is subject to occasional shifts"; Kim et al. (1998) tested for mean reversion in heteroskedastic stock returns data and found weak evidence of mean reversion in returns on equal-weighted portfolios and, as for the value-weighted portfolio, no mean reversion.

Markov Switching Regression and Market comovements

Gallo and Otranto (2008) studied the transmission mechanisms of volatility between markets using model estimated on the weekly high–low range of five Asian markets within a Markov Switching bivariate model assuming by assigning Hong Kong a central but not necessarily dominant role. Their results show a long run spillover from Hong Kong to Korea and Thailand, interdependence with Malaysia and comovement with Singapore

Pastpipatkul, Yamaka and Sriboonchitta (2016) analyze the dependency between Thailand, Indonesia, and the Philippine (TIP) stock markets and gold markets (TIPGOLD) using dynamic copula with 2 states (high dependence and low dependence) Markov-switching model. Using daily data from January 2008 to November 2014, they found that – at the same time with the European debt crisis – the Gaussian copula identifies a long period of high dependence of TIPGOLD returns (market downturn).

Data and Methodology

Data

We collected daily JCI, HSI, SNP, and SET index value from January 2016 to December. Fig. 1 plots the indices: a) JCI, b) HSI, c) SNP, and d) SET. All the indices show a significant drop at the time WHO announced COVID-19 as the global pandemic.

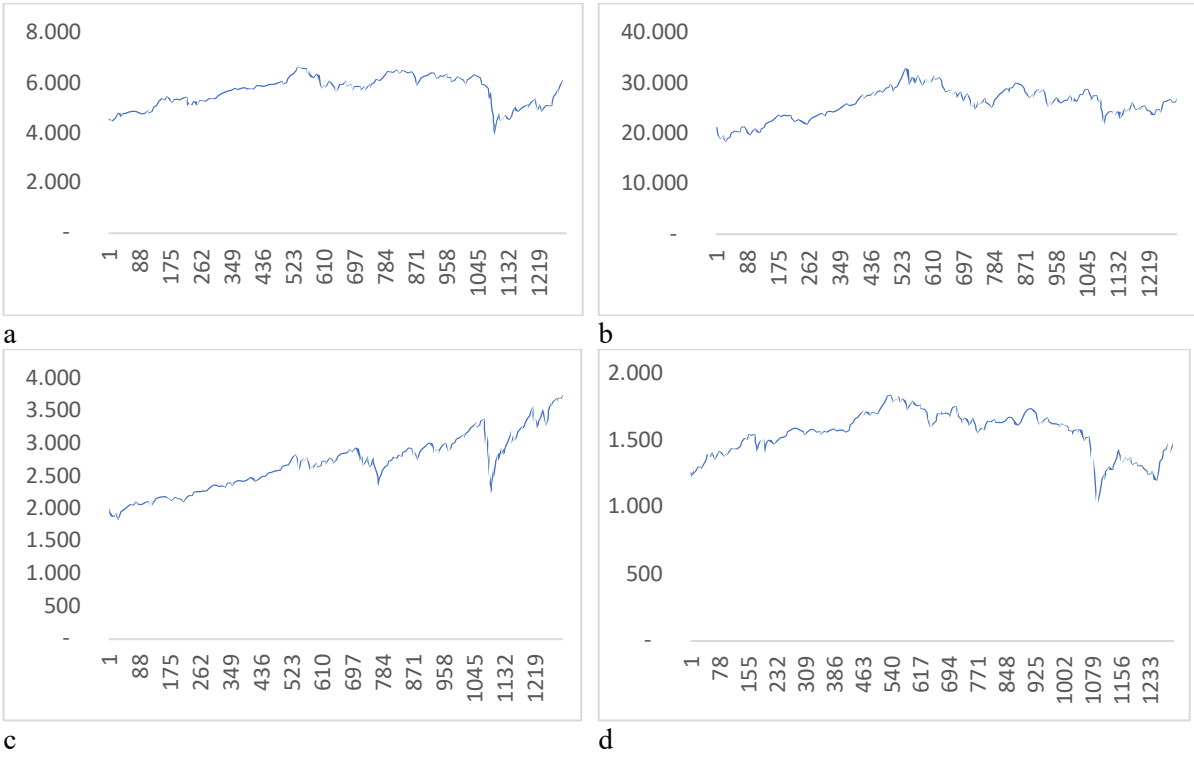

Fig. 1 Indices: a: JCI, b: HSI, c: SNP, and d: SET

Methodology

Markov Switching Regression is used to estimate the synchronization and desynchronization states of the Jakarta Composite Index (JCI) with three other indices: the Hong Kong's Hang Seng Index (HSI), US' S&P 500 (SNP), and Thailand's SET Index (SET). We choose HSI and SNP indices because of their importance in the financial world and SET because it is currently the largest stock market in the South-East Asia.

We assume that we can describe the data generating process of the JCI and the other three indices by two unobservable states that are determined by a first order Markov process (S_t). In the first state, the changes in the JCI were not determined by the changes in HSI, SNP, and SET but by other factors. In the second state, the changes in the JCI were determined by the changes in HSI, SNP, and SET.

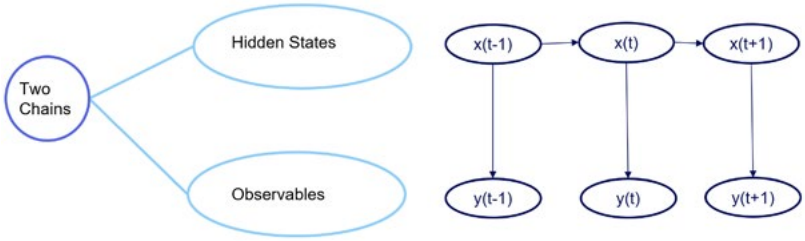

Fig. 2 The conceptual model

Fig. 2 shows the conceptual model of the parts that are hidden (the states) and the parts that are observable and Fig. 3 relates the model with the data

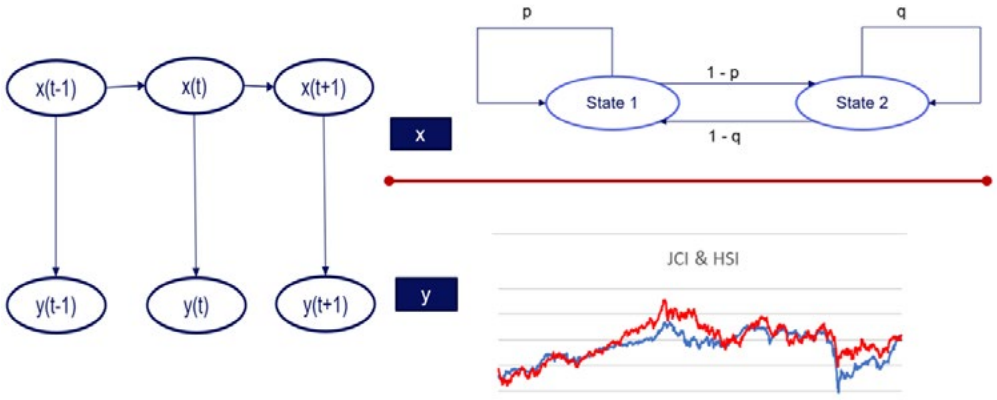

Fig. 3 The conceptual model and the data

The hidden random variable (S_t) that determines the state of change in JCI has the transition probability defined in Eq. (1):

$$Pr[S_t = 1|S_{t-1} = 1] = p, \qquad Pr\,[S_t = 2|S_{t-1} = 2] = q \tag{1}$$

If $S_t = 1$ then changes in JCI are not affected by the changes in SNP, HSI, and SET but by other factors and if $S_t = 2$ then changes in JCI are affected by the changes in SNP, HSI, and SET. Since the states may be changing, then the probability that the state will change given the last state will be 1 – p for $S_t = 1$ to $S_t = 2$, and 1 – q for $S_t = 2$ to $S_t = 1$.
The changes in JCI is assumed to be determined by the following equations

$$\text{If } S_t = 1, b_{1i} = 0, \quad \Delta R_{JCI} = a_1 + \varepsilon_t, \quad \text{where } \varepsilon_t|S_t = 0 \sim N(0, \sigma_1^2) \tag{2}$$

$$\text{If } S_t = 2, b_{2i} \neq 0, \quad \Delta R_{JCI} = a_2 + b_{21}\Delta R_{HSI} + b_{22}\Delta R_{SNP} + b_{23}\Delta T_{SET} + \varepsilon_t, \quad \text{where } \varepsilon_t|S_t = 1 \sim N(0, \sigma_1^2) \tag{3}$$

where ΔR_{JCI} is the change in the JCI return, ΔR_{HSI}, ΔR_{SNP}, and ΔR_{SET} are the changes in the returns of HSI, SNP, and SET respectively. Furthermore, the b in Eq. (3) is the measure of index synchronization.

Results

Stationarity testing

Time series data is known to be non-stationary that can lead to spurious results. To be able to analyze the time series we must be sure that the time series is stationary. The first step in time series analysis and modeling, then, is to do the stationarity testing. Using the Augmented Dickey Fuller Test, we can see the results for the indices (in the level and return terms)

Index	p-value	
	Level	Return
JCI	0.2986	0.000
HSI	0.2886	0.000
SNP	0.7701	0.000
SET	0.2085	0.000

Table. 1 Augmented Dickey Fuller Test results

Since the null hypothesis in the Augmented Dickey Fuller test stated that the time series is non stationary, we can see from Table 1 that for the Level, we accept the null hypothesis with the meaning that all indices are not stationary at the Level, but, since we reject the null hypothesis at the return, then

all the time series are stationary at the return. Since the time series analysis required stationary condition, we continue our analysis using the Index Return as can be seen from Fig. 4

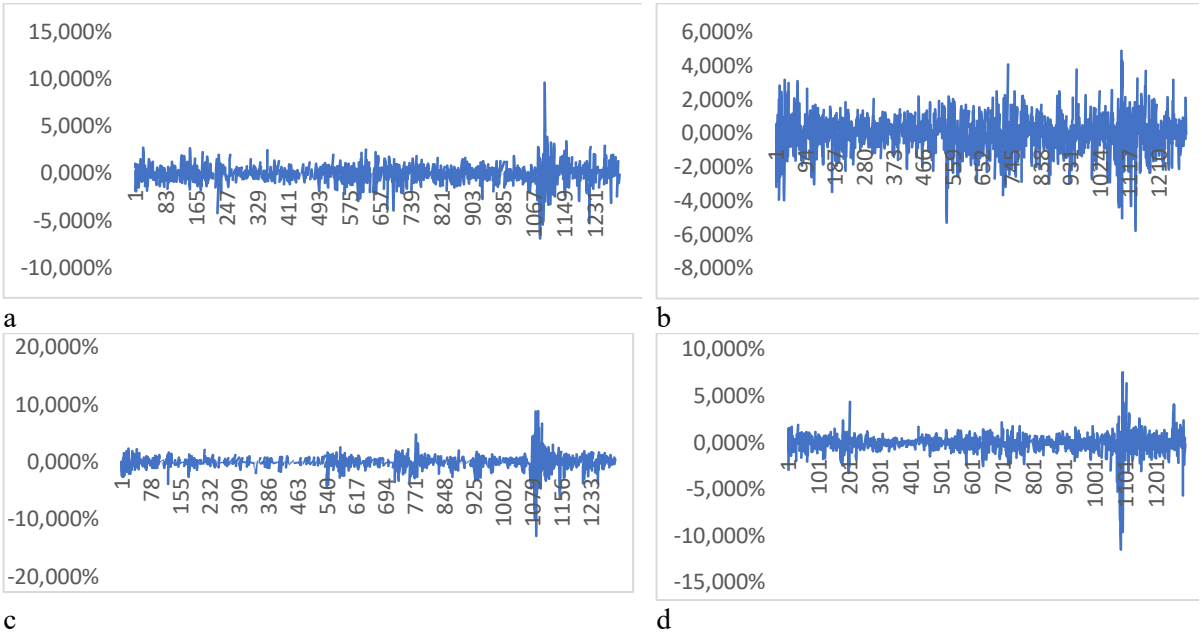

Fig 4. Index return, a: JCI return, b: HSI return, c: SNP return, d: SET return

Markov switching regression results

State identification

Table 2 show the Markov switching regression results. We can see from Table 2 that of the three variables in State 1, only the coefficient of RSNP that is significant while the coefficients of RHSI and RSET are not. On the other hand, in State 2, all coefficients are significant. Based on the results, we can conclude that State 1 is the desynchronization state while State 2 is the synchronization state

Index return	State 1	State 2
RHSI	0.0984 (0.4321)	0.2388 (0.000)
RSNP	0.8673 (0.0000)	-0.0586 (0.0249)
RSET	-0.1022 (0.1820)	0.03207 (0.0000)

Table 2 Markov switching regression result

Transition matrix and constant expected duration

Fig. 5 and Fig. 6 show the transition matrix and the constant expected duration

We can see the transition matrix for the regression result in Fig. 4

		To	
	State	1	2
From	1	0.5055	0.4945
	2	0.0620	0.9380

Fig. 5 Transition matrix

Fig. 4 shows the probability of moving from a state to another. From Fig. 4 we can see that if we are now in the desynchronization state, there is a 0.5055 probability that we will still be in desynchronization state and 0.4945 probability that we will move to the synchronization state, while if we are in

synchronization state, there is a 0.9380 probability that we will still be in synchronization state and 0.0620 probability we will move to desynchronization state.
Fig. 5 shows the constant expected duration, the average duration that we will be in a particular state. We can see that the duration in synchronization state (16.1266) is much longer – 8 times – than the duration in the desynchronization state (2.0222)

State	1	2
Duration	2.0222	16.1266

Fig. 6 Constant expected durations

Smoothed regime probabilities.
Fig. 7 shows the smooth regime probabilities for State 2. We can see that for the large part of the five years from 2016 – 2020, the smoothed regime probabilities are very high, higher than 0.8. This means that for the large part of time the indices are in synchronization state, or, in other words, the change in the JCI can be determined by the change in HSI, SNP, and SET. The condition is a little bit different when WHO declared COVID-19 as a global pandemic. Starting from that time, especially at the beginning of March 2020, we can see that desynchronization state starts to occur more often and the duration of synchronization state become much shorter.

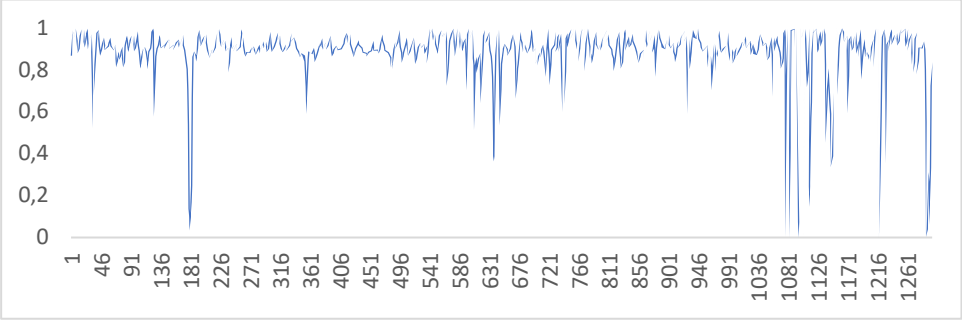

Fig. 7 Markov switching smoothed regime probabilities

Discussion
This study aims to make inferences about the effect of the Hang Seng (HSI, Hong Kong), S&P500 (SNP, United States) and SET (Thailand) indices on the Jakarta Composite Index. The result can contribute to the existing stock market comovement, especially because there are very limited research regarding the comovement between Indonesia stock exchange and other major stock exchanges and the existing literatures have never explored the comovement of market
This study is important because we have investigated the synchronization state of the indices used in this study. Furthermore, this study was also able to find out the transition matrix and the duration of being in a particular state, and more importantly, on the base of the result, this study has shown the occurrence of synchronization for the major part of the sample. The study has also been able to identify that starting from the beginning of the COVID-19 pandemic, the desynchronization state started to occur more often and the duration of the synchronization state has became shorter. The finding of this study can be related to Bekaert et al. (2014). Since we are using daily data, the plausible explanation of stock market comovement may be caused by investor herding behavior. The result may help investors in some ways. First, the result may help investor in predicting the direction of the market. Second, the result may help investor in identifying the investment opportunity in the Indonesia Stock Exchange by studying the Hang Seng, S&P500, and SET indices movement.
The limitation of the study is that we only use daily data and consider market indices as the variables. Further research can use other type of data and consider other variables such as economic variables, gold prices, foreign exchange, and other related variables.

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FACTORS AFFECTING THE PERFORMANCE OF BPKP AUDITORS DURING THE COVID-19 PANDEMIC

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Abstract
This study aims to examine the effect of auditor independence, motivation, the situation on the performance of BPKP auditors through professional auditor skepticism as an intervening variable during the Covid-19 pandemic. This study uses literature review data. The population in this study were all internal auditors of BPKP in national scope, from functional positions as implementing auditors, advanced implementing auditors, supervisory auditors, junior auditors, first auditors, middle auditors, middle auditors, main auditors and middle auditors as supervisory coordinators. The results of this study indicate that: 1) Independence plays an important role in supporting auditors' professional skepticism, 2) Motivation plays less role in supporting auditors' professional skepticism, 3) Auditor's situation plays an important role in supporting auditor's professional skepticism, 4) Auditor's professional skepticism plays an important role in supporting performance. BPKP Auditor, 5) Independence plays an important role in supporting BPKP Auditor Performance, 6) Motivation plays an important role in supporting BPKP Auditor Performance, 7) Auditor situation plays an important role in supporting BPKP Auditor Performance.
Keyword: Independence; Motivation; Auditor Situation; Auditor Professional Skepticism; Auditor Performance.
JEL : M42

Introduction

BPKP is the Government Internal Supervisory Apparatus (APIP) which plays a role in realizing good governance. Based on article 49 paragraph (2) of PP Number 60 of 2008 concerning the Government Internal Control System, BPKP performs the function of internal control over the accountability of state finances by order of the President. The Government's Internal Control System (SPIP) emphasizes the role of BPKP as the President's auditor who is tasked with conducting internal oversight of state financial accountability and supervising the implementation of SPIP. This strategic role has been addressed by carrying out repositioning and revitalization.

Auditor performance is an act or implementation of an audit task that has been completed by the auditor within a certain period time. Auditor performance is an activity where the auditor carries out his duties in examining company reports which will be completed by him within a certain time (Trisnaningsih, 2007). Government audits, especially performance audits, are the main key to the government's obligation to be accountable to the people. Performance audit is a systematic process of obtaining and objectively evaluating evidence on the performance of an organization, program, function or activity.

BPKP to improve its performance to create *good governance* requires optimal supervision so that all auditors can work according to their functions. One of the managerial efforts used to improve the performance of BPKP auditors requires a good attitude of professionalism, independence, independence as well as good organizational culture and motivation to work as well. In addition, coordination between management is needed, and ultimately improves the organizational performance of the BPKP. Research on auditor performance is conducted because the BPKP Auditor is an internal government auditor who has a position that is vulnerable to pressure, especially political pressure. In addition, the internal auditor (BPKP) has a very important role in efforts to eradicate corruption. This is often known to auditors as a double-edged sword. That is, the auditor expects the creation of good public governance (Anggraini & Syofyan, 2020).

In this study, researchers will use the internal auditor of BPKP. The reason the researcher chose BPKP as the object in this study is the previous studies related to this study were more dominantly conducted at the Public Accounting Firm (KAP) or the inspectorate. In addition, BPKP is a Non-Ministerial Government Institution (LPNK) under the President which has the function and authority to increase risk effectiveness and maintain and improve the quality of governance of government agencies.

In addition, BPKP also conducts audits, reviews, evaluations, monitoring, and other supervisory activities on the planning, implementation and accountability of state/regional revenue accountability and accountability of state/regional financial expenditures as well as national development and/or other activities whose finances are wholly or partly financed by the government. state/regional budgets and/or subsidies including business entities and other entities in which there is a financial interest or other interest from the Central Government and/or Regional Government as well as accountability for state/regional financial financing (www.bpkp.go.id).

These research problem are 1) Do independence plays an important role support auditors' take effect to professional skepticism? 2) Do motivation plays less role support take effect to auditors' professional skepticism?, 3) Do auditor's situation plays an important role in support take effect to auditor's professional skepticism?, 4) Do auditor's professional skepticism plays an important role take effect to support performance BPKP Auditor?, 5) Do independence plays an important role take effect to support BPKP Auditor Performance?, 6) Do motivation plays an important role take effect to support BPKP Auditor Performance?, 7) Do auditor situation plays an important role take effect to support BPKP Auditor Performance?

STAKEHOLDER THEORY

Stakeholders Theory is a theory that becomes a point of view in understanding how companies or government agencies or each party assist corporations in strengthening relationships with external groups in developing competitive advantage, namely to achieve organizational goals. In addition, this stakeholder theory also describes which parties the company is responsible for (Parmar, Freeman, Harrison, & Colle, 2010).

Stakeholder theory defines that an agency is not one that only operates for its own sake but must provide benefits to its stakeholders. Therefore, the existence of an agency is strongly influenced by the support provided by stakeholders to the agency. *Gray, Kouhy and Adams* said that the survival of the agency depends on the support or support of stakeholders so that the activities of the company or agency are to seek that support (Handoko, 2014).

MOTIVATION THEORY

Vroom (2010), reveals the power that motivates individuals to work well is influenced by the reciprocal relationship between what is desired and needed, how much is the individual's belief that the company will provide satisfaction for individual desires in return for the work done. If the belief that is expected to obtain satisfaction is large enough, the individual will work as well as possible and vice versa. In other words, expectancy theory helps explain why many internal auditors are unmotivated in their work and only do the minimum work to save them.

Motivation with expectation theory Vroom (1964), explains that the strength of a tendency to act professionally by an independent auditor depends on the strength of an expectation that the professional action will be followed by *outputs* certain and the attractiveness of that *output* for independent auditors. Expectancy theory helps explain why so many workers are unmotivated in their jobs and simply do the minimum to save themselves. Auditors hope that the higher they use their professionalism in carrying out their duties, the higher the work results obtained both for themselves and their organization. So that professionalism is an element of motivation that explains individual behavior to achieve its goals.

SKEPTICISM THEORY

The word skeptic which means doubt or doubt is the origin said skepticism (Lasiyo, 1986). Then another explanation of skepticism namely skeptomai from Greek which means careful thought or with accuracy (Sudarminta, 2002). So from the sense of skepticism. Therefore, skepticism is a theory that every individual has basic thinking attitude of doubt about a truth and not make it affected in accepting the existing truth. Furthermore, if it is related to the audit aspect, then the attitude of professional skepticism auditor can be interpreted as an auditor's attitude in doing audits.

PERFORMANCE THEORY

Bernardin and Russell (1993) provide an understanding or performance as following: "performance is defined as the record of outcomes produced on a specified job function or activities during the time period." Achievement or performance is a record of the results obtained from certain job functions or activities over a period time certain.

Job performance is the result of work related to goals organization, efficience and other performance effectiveness (Gibson, et al, 2003: 35). Meanwhile, according to Ilyas (1999: 99),

performance is the appearance of the work of personnel or within an organization. The appearance of the work is not limited to personnel holding functional and structural positions but also to the entire line of personnel in the organization.

Research Results

Independence of Audit Professional Skepticism.

The results of the study are in line with those of Basri et al, (2019); Kurnia et al, (2016) regarding the relationship between independence and professional skepticism of auditors, obtained results that show the influence of independence has a significant effect on internal auditor professionals. These results mean that independence has a significant relationship to the professional skepticism of internal auditors where independence encourages internal auditors' professional skepticism. Every profession that provides services to the community must have a code of ethics which is a set of moral principles and regulates professional behavior. Meanwhile, Kharismawati & Triyuwono, (2020) also stated that an accountant needs to apply independence because it requires knowledge and skills in completing his work. Therefore, the application of independence is very important in a job so that the professional bearer is responsible for his duties. This is also supported by Riris Rotua Sitorus, (2016) and Heryana, (2020) who state that the independence of an accountant should have a high moral commitment which is usually stated in the form of special rules that serve as a guide for everyone who develops the profession concerned. These rules will encourage an accountant to carry out their performance as well as possible.

The Effect of Motivation on Audit Professional Skepticism

The results of this study are in line with the research of Wardayati, (2016) which states that an auditor's motivation doesn't effect on auditor professional skepticism. Motivation doesn't effect on auditors' professional skepticism due to indicators of self-development with the results of a questionnaire statement concluding that self-development during pandemic conditions cannot run optimally.

This is because the BPKP auditor is an internal government auditor who not only focuses on maintaining good relations with auditees but also has to be able to improve the quality of governance. The results of this study are in line with the research of Giantari & Riana, (2017) Sagita et al, (2018) which states that someone who applies good motivation does not necessarily increase auditor professional skepticism.

This result means that this research hypothesis is rejected, because it can be explained that there is no significant influence between motivational variables on professional audit skepticism. These results are in accordance with the research of Yuswani (2016) Guo, Wang, & Feng, (2014); Patnaik, (2011) and Sinha, Singh, Gupta, & Dutt, (2010) and Ambarwati, (2018) that motivation has a negative influence on professional auditor skepticism.

The Effect of Auditor Situation on Audit Professional Skepticism.

The results of this study are in line with the research of Sitorus, (2016) which states that the independence of an auditor will affect the professional skepticism of auditors. The situation of auditors affecting auditors' professional skepticism is caused by two things, namely the pandemic conditions that hit the world because most auditors do WFH so that auditors cannot apply the code of ethics to the maximum and auditors are constrained in carrying out work initiatives to find the best steps during the pandemic.

Thus, it can be concluded that in carrying out an attitude of professional skepticism, it must be followed by supportive environmental conditions so that each auditor's code of ethics can be maximized to achieve optimal results. Therefore, the code of ethics of each auditor must be upheld, besides every professional must also have work initiatives to achieve the expected performance. This can be used as a reference that the higher an auditor's sense of responsibility for his work, the auditor's performance will automatically increase, and vice versa if the sense of responsibility is low, the auditor's performance will decrease.

Audit Professional Skepticism on BPKP Auditor Performance Auditor

Professional skepticism is defined as an attitude that includes a mind that always questions and evaluates audit evidence critically (SPAP, 2011:230.2) in carrying out the audit and preparing the report, the auditor is required to use his professional skills carefully and thoroughly (*due professional care).*

The careful and thorough use of professional skills requires the auditor to exercise professional skepticism. The results of this study are in line with Singgih and Bawono (2010), Gusti and Ali (2009) Diyatama (2012) which means, high or low professional skepticism of auditors will affect the quality or not of an audit produced. A positive relationship indicates that the higher the professional skepticism, the higher the quality of the resulting audit.

The Effect of Independence on the Performance of BPKP Auditors

Research Anggraini & Syofyan, (2020) Basri et al., (2019); Istiarini, (2018); Karo & Siagian, (2018) stated that independence means that a public accountant must be honest not only with the management and owners of the company, but with creditors and other parties where they place their work confidence in public accountants. Independence is the mental attitude of an auditor where he is required to be honest and impartial throughout the audit and in positioning himself with his auditee.

Auditor independence is an attitude of honesty of an auditor to complete his duties with sincerity to produce maximum and high performance. This is in line with the research of Yulianti & Hamdiah, (2016) and S.Kemb et al, (2019) which state that there is a positive influence between the independent variables on the audit performance variable in the results of the examination. If the independence of the auditor can be increased, the performance of the auditor will increase. Independence has a relationship with the performance of government auditors, the more an auditor has high independence then he will not be easily influenced by other parties.

The results of this study support the stakeholder theory proposed by (Parmar et al, (2010) explaining that every organization or agency in achieving its goals must be able to create good relations between external groups and every professional must have good independence. Thus from the fifth hypothesis of variable independence effect on the performance of BPKP auditors is accepted.

The Effect of Motivation on BPKP Auditor Performance

Research Wardayati, (2016) which states that an auditor's motivation effect on auditor performance. Motivation does effect on performance caused by indicators of self-development with the results of a questionnaire statement concluding that self-development during pandemic conditions cannot run optimally. This is because the BPKP auditor is an internal government auditor who not only focuses on maintaining good relations with auditees but also to be able to improve the quality of governance. This is also supported by Fauziah's research, (2017) that the motivation that exists in a person will realize a goal-directed behavior in order to achieve the ultimate goal of being professional, but must also be supported by a conducive working environment so that the expected goals can be optimal. The BPKP auditor is an auditor directly under the president, so every main task must be based on the applicable laws and regulations. Therefore, the motivation variable is not the main factor in achieving the auditor's performance.

Auditor Situation on BPKP Auditor Performance

According to Rahmadayanti & Wibowo, (2017) the auditor situation is a condition that is shared in an organization. The auditor's situation can facilitate the emergence of organizational commitment compared to commitments that are of individual interest. The results of this study are in line with the research of Giantari & Riana, (2017) Sagita et al, (2018), Yuswani (2016); Guo, Wang, & Feng, (2014); Patnaik, (2011) and Sinha, Singh, Gupta, & Dutt, (2010) which state that the application of a good auditor situation will positively and significantly improve employee work performance, as well as a poor organizational culture will negatively and significantly reduce motivation employee work. This result means that this research hypothesis is accepted, because it can be explained that there is a significant influence between the auditor situation variables on the performance of BPKP auditors.

Conclusions

conclusions of this study are as follows:

1. Independence plays an important role in supporting auditors' professional skepticism,
2. Motivation plays a less role in supporting auditors' professional skepticism,
3. Auditor's situation plays an important role in supporting auditors',in supporting auditors'
4. Professional skepticism Auditor's professional skepticism plays an important role in supporting BPKP Auditor Performance professional skepticism.

5. Independence plays an important role support BPKP Auditor Performance,
6. Motivation plays an important role in supporting BPKP Auditor Performance, Auditor
7. Situation plays an important role in supporting BPKP Auditor Performance

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The Effect Of Competency, Independence And Ethics On Audit Quality (Case Study At Bpkp Of Papua Province Representative Office)

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Abstract
To producing a good audit quality, the auditor must have a high standard of compet ence in order to produce a good audit quality. In addition, an attitude of independence and ethics is also needed to improve audit quality. This study aims to determine the effect of simultaneously and partially, competency, independence and ethics on audit quality. This study uses primary data obtained from a questionnaire measured by a Likert sc ale. The population is the BPKP auditor for the Papua Province Representative. The sample ng technique used is non-probability sampling with a saturated sample type. The number of sample is 51 respondents. The analysis prerequisite test includes normality test, multicollin earity test, heteroscedasticity test, and autocorrelation test. The data analysis technique use d to test the hypothesis is multiple regression analysis. The results showed that simultaneously the competence, independence, and ethics of auditors had a significant effect on audit quality at BPKP Papua Province Representatives. Partially, independence and ethics have a positive and significant effect on audit quality, but partially for auditor competence have a positive but not significant effect on audit quality. Results Based on the research obtained, this research can be used as input for Gove rnment Agencies, especially for auditors at the BPKP Representative Of Papua Province nce. Auditor ethics is the most dominant variable influencing the improvement of audit quality.
Keywords: Audit Quality, Competency, Ethics, Independence.

1. Introduction

Demands for the implementation of a clean and corruption-free government in Indonesia Indonesia is increasing. To achieve this, it is necessary to implement good supervision and internal control system to ensure implementation government activities and management of state finances are in accordance with the policies and predetermined plan. Every government entity, both central and regional, must submit an accountability report in the form of financial statements for one period.

According to Agoes (2017:4) audit is an examination that is carried out critical and systematic, by an independent party, on the financial statements that have been prepared by management, together with accounting records and supporting evidence, with the aim of providing an opinion regarding the fairness of the financial statements. On Generally, audits are divided into two types, namely public sector audits and private sector audits. Public sector audits are conducted on non-profit government organizations, such as regional government sector (Pemda), certain BUMN/BUMD and other agencies that related to state finances, while private sector audits are private-owned companies that are for-profit in Agoes (2017:4).

One of the institutions engaged in the supervision of state finances is Financial and Development Supervisory Agency (BPKP). The function of the BPKP is to conduct an investigative audit of indications of irregularities that are detrimental to the state, BUMN, and other agencies in which the government's interests exist, audit against obstacles to the smooth development and provision of audit assistance to agencies investigators and other governments (BPKP, 2019). The success of an organization carrying out audit mission depends on the performance of the auditor, including the performance of the auditor government at the Papua Province BPKP which carries out government duties in the field of supervision and finance reported to the President as head of government as a material consideration in setting strategic policies.

Cases that have been found and published in electronic media by (Jubi, 2020), the results audits for the last 5 years (2015-2020) by auditors representing BPKP Papua Province which was then handed over to the Corruption Eradication Commission (KPK) found that as many as 10 cases of misappropriation of state finances with significant losses generated approximately IDR 53.6 billion. This proves that the BPKP Representative Papua Province has good competence, can produce good audit quality good, so as to be able to find cases of misuse of state finances in the process the audit.

Then the next case is the results of the audit report on the Revenue and Expenditure Budget Papua Province Changed Regional Expenditures (APBD-P) in 2018 audited by BPKP Representatives of the Papua

Province and then submitted to the Eradication Commission Corruption (KPK) published that the Kemiri-Depapre road section improvement project was Papua Province worth IDR 89.5 billion, there have been indications of losses for the State. In BPKP'sexamination found that an indication of a loss of around IDR 42 billion or almost half of the value of the project being worked on by PT. Bintuni Energy Persada (Jubi, 2019).

Based on the above phenomenon, the author argues that competence is a one of the principles that must be carried out by auditors in order to ensure good audit quality generated. So from the quality of the audit produced by the BPKP Representative auditor Papua Province, can reveal misuse of state finances, especially in APBD/APBN.

According to research (Hasanah, 2019), competence and independence have an effect significant positive. Meanwhile (Fitriani, 2018) and (Rivani, 2018), explained that competence has an effect on audit quality and independence has no effect on audit quality. In research (Triana, 2017), it is proven that independence and ethics have no effect on audit quality. From the results of previous studies, there are still inconsistencies in research results so that researchers need to conduct further research related to audit quality.

2. Basic Theory

2.1 Agency theory

Agency theory put forward by Meckling & Jansen, (1967) is a contractual relationship between the owner of the company *(principal)* and management *(agent)* , where the owner of the company authorizes management to carry out the company'soperational activities. Company owners expect management to optimally utilize existing resources for the welfare of the *principal* in the short and long term (Gudono, 2017: 26)

2.2 Auditing

According to Mulyadi (2016: 9), auditing is a systematic process to obtain and objectively evaluate evidence regarding statements about economic activities and events, with the aim of determining the level of conformity between these statements and predetermined criteria, as well as the delivery of results. -results to interested users.

2.3 Audit Quality

According to De Angelo in (Saputra, 2017) interpreting audit quality as the probability that the auditor will find and report violations that exist in the client'saccounting system. The ability to find material misstatements in the company'sfinancial statements depends on the competence of the auditor while the desire to report the findings of such misstatements depends on their independence. The Indonesian Institute of Accountants states that the audit conducted by the auditor can be said to be of quality, if it meets auditing standards and quality control standards.

According to (Harahap, 2015) there are five indicators that can be used to measure the independence of an auditor, namely: management of the audit function, scope of assignments, planning of assignments, implementation of assignments, and communication of assignment results.

Research conducted by Haq (2016) states that independence, competence and ethics simultaneously affect audit quality. This is in line with Gaddafi (2014) which states that competence, and independence and ethics simultaneously have a significant positive effect on audit quality. According to the author'stheory and understanding, it can be said that the higher the competence, independence and ethics of an auditor, the better the quality of the audit results.

Ha,1: Competence, Independence, and Ethics has a positive effect on audit quality.

2.4 Competence

The competence of an auditor is usually related to the knowledge, expertise and experience of the auditor. Thus, an auditor must able to apply their knowledge and experience in conducting audits with responsibility. According to Tandiotong (2016) a competent auditor is an auditor who have sufficient knowledge, training, skills and experience to able to successfully complete the audit work.

The Indonesian Institute of Accountants (2016) states that audits must be carried out by one or more persons who have sufficient technical expertise and training by a auditors. Although a person's high ability in other fields (including business and finance) he cannot fulfill the requirements referred to in this auditing standard, if he does not have adequate education and experience in the field of auditing.

According to (Harahap, 2015) there are five indicators that can be used to measure competence of an auditor, namely: knowledge possessed, skills/expertise possessed, the attitude possessed, the ability possessed in applying the standard collective examination and continuing professional education and

training. Christiawan in (Saraswati, 2017) suggests that audit quality is determined by competence and independence. Both of these things directly affect the audit quality. According to Kartika & Pramuka (2019), it describes influential competencies positive on audit quality. This is in line with Hasanah's research (2019) that competence has a significant positive effect on audit quality.

Ha,2: Competence has a positive effect on audit quality.

2.5 Independence

According to (Harahap, 2015) there are five indicators that can be used to measure the independence of an auditor, namely: auditor independence, independence in reality *(Independence in Fact),* independence in appearance *(Independence in Appearance),* independence in the audit program, independence in reporting.

Arens et al., (2015:102) stated that independence is one of the an ethical component that must be maintained by public accountants, as well as a requirement for the auditor to perform audit procedures aimed at assessing the fairness financial statements. Therefore, accountants are expected to always be independent when accountants are not independent, then the opinion they give will not give value whatever. Meanwhile, according to Karnia & Haryanto (2015) independence is the attitude of an auditor who does not take sides with anyone or can not be suspected of taking sides so as not to harm any party. In research conducted by Rivani (2018) explains that independence has a significant effect on audit quality. This is in line with research conducted by Mardijuwono & Subianto (2018) that independence is positively related to audit quality.

Ha, 3: Independence has a positive effect on audit quality.

2.5 Ethics

According to Kisnawati in (Yulianti, 2015), ethics are generally defined as moral principles or values. In a narrow sense, ethics means a set of values or moral principles that have a function as a guide to act, act or behave. The audit implementation must refer to this audit standard, compliance with ethics is an inseparable part of the implementation of good auditing standards. Morals and ethics have the same function, namely to provide orientation on how and where we should go in this life. Morality gives humans concrete rules or instructions on how to live, act in life as good human beings and avoid bad behavior, while ethics talks about moral values and norms that determine human behavior in life.

Research conducted (Wahyuni, 2017) there are four indicators that can be used to measure the ethics of an auditor, namely: personality, professional skills, responsibility, and implementation of the code of ethics.

Based on research conducted by Fitriani (2018), it is stated that ethics has a significant effect on audit quality. This is supported by research conducted by Arumega (Zarefar et al., 2016), which concludes that ethics affects audit quality.

Ha,4: Ethics has a positive effect on audit quality.

3. Research Method

The population in this study were all auditors at the Development and Finance Supervisory Agency (BPKP) Representative of Papua Province. The sampling technique used is *non-probability sampling* with a saturated sample type, then the number of samples obtained is 51 respondents. The analytical technique used in this research is multiple regression analysis. Here are the operational variables:

Table 1. Variable Operation

Variable	Concept Variable	Indicator	Item Question	Skala
Competence (X1)	Competence is a qualification that must be prossessed by an auditor to conduct an audit properly.	1. Knowledge possessed	1-2	Ordinal
		2. Skills/Skills possessed	3-4	
		3. The attitude you have	5-6	
		4. The ability possessed in applying audit standards collectively	7-8	

	Lesmana dan Machdar (2016)	5. Education and professional training sustainable	9-10	
		Source : Harahap (2015)		
Independence(X2)	Independence is attitude mental regardless of influence, no could controlled by the other party, not dependent on other people. Mulyadi (2016:26)	1. Auditor Independence	1-2	Ordinal
		2. Independence in Fact	3-4	
		3. Independence in Appearance	5-6	
		4. Independence in audit program	7-8	
		5. Independence in reporting	9-10	
		Source : Harahap (2015)		
Ethics (X3)	Ethics is critical attitude every individual or group public in realize morality, and ethics urge someone for act accordingly with morality. Suraida in Rakatama et al, (2016)	1. Personality	1-3	Ordinal
		2. Professiona Skillsl	4-5	
		3. Responsibility	6	
		4. Inplementation of the code of ethics	7-8	
		Sourcer : Wahyuni (2017)		
Audit Quality (Y)	Audit quality is probability where is one auditor find and report about existence something violation in system accountancy his client. De Angelo in Saraswati (2017)	1. Audit Function Management	1-2	Ordinal
		2. Scope of Assignment	3	
		3. Assignment Planning	4-6	
		4. Implementation of Assignrments	7-8	
		5. Assignment Results Communication	9-10	
		Source : Harahap (2015)		

4. Results and Discussion

4.1 Characteristics of Respondents

Respondent data by gender is dominated by male sex as many as 39 auditors (76.47%). Meanwhile, only 11 female auditors (21.57%) and 1 auditor did not answer (1.96%). Based on the age dominated by the age between 21 – 30 years as many as 23 auditors (45.10%), ages between 31 - 40 years as many as 14 auditors (27.45%), only 9 auditors (17.65%) aged more than 40 years old and those who did not answered as many as 5 auditors (9.80%). Based on the highest working period, which is between 1 – 5 years as many as 27 auditors (52.94%), followed by tenure between 6 – 10 years as many as 14 auditors (27.45%), and more than 10 years of service as many as 5 auditors (9.80%). While the minimum working period of less than 1 year is 2 auditors (3.92%) and who did not answer 3 auditors (5.88%).

4.2 Validity and Reliability Test

Table 2. Validity and Reliability Test

Variable	Pearson Correlation	Pearson Correlation
Competence (X1)	(r-count > 0.30)	0,912
Independence (X2)	(r-count > 0.30)	0,891
Ethics (X3)	(r-count > 0.30)	0,947
Audit Quality (Y)	(r-count > 0.30)	0,925

Source: Primary Data Processed (2021)

Based on the results of the validity test in Table 2, it can be seen that all items has a correlation value above 0.30 (r > 0.30) which means that the items used in this research instrument is stated to have met the validity criteria, and the test results reliability has a *Cronbach's alpha* value above 0.60 (a > 0.60) then the instrument research is considered to have met the criteria of reliability.

4.3 Classical Assumption Test Results

A. Normality Test Results

Table 3. Normality Test

Kolmogorov-Smirnov Test 1-Sample (N=51) Value of		Residue Not Standardize
Normal Parameters	Mean	0
	Standard Deviation	0.22214478
Most Extreme Difference (D-Statistic Value)	D-Absolute	0.113
	D-Positive	0.104
	D-Negative	-0.113
Z . Statistical Test Value		0.113
Significance Value (2-tails)		0.099

Source: SPSS Data Processing (2021)

Based on the output of SPSS data processing in Table 3, the test results *Kolmogorov-Smirnov* shows the value of D-Statistics = 0.104 (see column *Most Extreme Differences: Positive).* It is known for the number of data n = 51 with the significance of 0.05, then from the table *Kolmogorov-Smirnov* obtained the value of D-table = 0.190. Based on the comparison D-count (0.104) is smaller than the value of D-table (0.190) which means that the data is normally distributed.

B. Multicollineality Test Results

Table 4. Multicollinearity Test

Variable	Statistics Collinearity	
	Tolerance	VIF
Competence (X1)	0,367	2,723
Independence (X2)	0,267	3,744
Ethics (X3)	0,407	2,458

Source: SPSS Data Processing (2021)

It can be seen in Table 4, the results of the collinearity statistical test show the value of The tolerance is above 0.1 and the VIF value is less than 10. It means that the three variables independent are not correlated with each other. So it can be concluded that there is no multicollinearity problem.

C. Heteroscedasticity Test Results

Table 5. Heteroscedasticity Test

Relationship between variables		ANOVA test	
Independent Variable	Dependent Variable	F-count	Significance

Competence (X1) Independence (X2) Ethics (X3)	ABS_RES_1	0,407	0,749

Source: SPSS Data Processing (2021)

Based on Table 5, the results of the ANOVA test show the F-count value of 0.407 with a significance value of 0.749. It is known that the value of F-count (0.407) is more than smaller than the F-table (2.8024); or the significance value (0.749) is greater than the level established significance (0.05). So it can be concluded that does not happen heteroscedasticity problem.

D. **Autocorrelation Test Results**

Table 6. Autocorrelation Test Results

Relationship between variables		Durbin test-Watson
Independent Variable	**Dependent Variable**	
Competence (X1) Independence (X2) Ethics (X3)	Audit Quality (Y)	1,995

Source: SPSS Data Processing (2021)

In Table 6, the Durbin-Watson test results show the Durbin-Watson value = 1,995. It is known that the amount of data is n = 51 with a significance value of 0.05 and the number of independent variable k = 3, then from the Durbin-Watson table obtained the value of dL = 1.421 and dU = 1.674. The DW (1.995) value is somewhere between dU (1.674) and 4-dU (4 – 1.696 = 2.326). So it can be concluded that there is no autocorrelation.

4.4 Descriptive Statistical Analysis

The description of each indicator is expressed in terms of frequency and average values. Description each indicator is expressed as a percentage score with the following criteria:

Table 7. Category of Score Interpretation

Percentage	Criteria	Category
20% – 35%	Very Not Agree	Very bad
36% – 51%	Do not agree	Bad
52% – 67%	Neutral	Enough
68% – 83%	Agree	Good
84% – 100%	Strongly Agree	Very Good

Source: Sugiyono (2019)

A. Competence (X1)

Table 8. Respondents' Responses to Competence (X1)

Indicator	Item No	Response						Total Score	%	Ideal Score
		1	2	3	4	5	Σ			

Knowledge	1	0	1	2	20	28	**51**	**228**	**89,41**	**255**
which are owned	2	0	0	1	21	29	**51**	**232**	**90,98**	**255**
Skills/expertise that owned	3	1	0	7	28	15	**51**	**209**	**81,96**	**255**
	4	0	3	4	23	21	**51**	**215**	**84,31**	**255**
Attitude owned	5	0	1	10	22	18	**51**	**210**	**82,35**	**255**
	6	0	0	5	16	30	**51**	**229**	**89,80**	**255**
The ability possessed in applying audit standards collectively	7	0	0	1	24	26	**51**	**229**	**89,80**	**255**
	8	0	2	10	19	20	**51**	**210**	**82,35**	**255**
Education and training professional who sustainable	9	0	0	1	26	24	**51**	**227**	**89,02**	**255**
	10	0	0	4	22	25	**51**	**225**	**88,24**	**255**
Total Score		**1**	**7**	**45**	**221**	**236**	**-**	**2214**	**86,82**	**2550**
Average Score								**221,4**	**86,82**	**255**

Source: Primary Data Processed (2021)

From the calculations in Table 8, the total score obtained is 2214 or 86.82% of the total ideal score. These results state that respondents assessing competence is in the very good category. Thus, competence the auditors at BPKP Papua Province Representative are very good. Competence determined of the knowledge possessed, the skills/expertise possessed, the attitude that possessed, the ability to apply appropriate standards, education and training sustainable.

B. Independence (X2)

Table 9. Respondents' Responses to Independence (X2)

Indicator	Item No	Response						Total Score	%	Ideal Score
		1	2	3	4	5	Σ			
Independence Auditor	1	1	0	6	24	20	**51**	215	84.31	255
	2	1	0	6	32	12	**51**	207	81.18	255
Independence in Reality	3	0	0	1	18	32	**51**	235	92.16	255
	4	0	0	4	23	24	**51**	224	87.84	255
Independence in Appearance	5	0	1	5	17	28	**51**	225	88.24	255
	6	0	1	3	26	21	**51**	220	86.27	255
Independence in Audit Program	7	2	4	12	23	10	**51**	188	73.73	255
	8	0	1	3	24	23	**51**	222	87.06	255

Independence in Reporting	9	0	0	3	24	24	**51**	225	88.24	255
	10	0	0	4	22	25	**51**	225	88.24	255
Total Score		**4**	**7**	**47**	**233**	**219**	**-**	**2186**	**85.73**	**2550**
Average Score								**218,6**	**85,73**	**255**

Source: Primary Data Processed (2021)

In Table 9 above, the total score obtained is 2186 or 85.73% of the total ideal score. These results state that respondents rate independence is in the very good category. Thus, independence the auditors at BPKP Papua Province Representative are very good. Competence determined of auditor independence, independence in fact, independence in appearance, independence in the audit program, and independence in reporting.

C. **Ethics (X3)**

Table 10. Respondents'Responses to Ethics (X3)

Indicator	**Item No**	**Response**						**Total Score**	**%**	**Ideal Score**
		1	**2**	**3**	**4**	**5**	**Σ**			
Personality	1	1	0	3	21	26	**51**	**224**	87.84	**255**
	2	0	0	6	26	19	**51**	**217**	85.10	**255**
Professional Skills	3	0	0	1	24	26	**51**	**229**	89.80	**255**
	4	0	0	4	23	24	**51**	**224**	87.84	**255**
Responsibility	5	0	0	1	20	30	**51**	**233**	91.37	**255**
	6	0	0	2	22	27	**51**	**229**	89.80	**255**
Implementation of the code of ethics	7	0	0	2	22	27	**51**	**229**	89.80	**255**
	8	0	2	3	23	23	**51**	**220**	86.27	**255**
Total Score		**1**	**2**	**22**	**181**	**202**	**-**	**1805**	**88,48**	**2040**
Average Score								**180,5**	**88,48**	**204**

Source: Primary Data Processed (2021)

From the calculations in Table 10, the total score obtained is 1805 or 88.48% of the total ideal score. These results state that respondents assessing ethics is in the very good category. Thus, auditor ethics in BPKP Papua Province Representative is very good. Ethics is determined from personality, professional skills, responsibilities, and implementation of the code of ethics.

D. Audit Quality (Y)

Table 11. Respondents' Responses to Audit Quality (X4)

Indicator	**Item No**	**Response**						**Total Score**	**%**	**Ideal Score**
		1	**2**	**3**	**4**	**5**	**Σ**			
Management of audit function	1	0	0	2	31	18	**51**	**220**	86,27	**255**
	2	0	0	6	24	21	**51**	**219**	85,88	**255**

Scope of assignment	3	0	0	6	30	15	**51**	**213**	83,53	**255**
	4	0	0	4	23	24	**51**	**224**	87,84	**255**
Assignment planning	5	0	0	1	30	20	**51**	**223**	87,45	**255**
	6	0	0	2	25	24	**51**	**226**	88,63	**255**
Execution of assignments	7	0	0	1	27	23	**51**	**226**	88,63	**255**
	8	0	1	4	28	18	**51**	**216**	84,71	**255**
Assignment result communication	9	0	0	1	27	23	**51**	**226**	88,63	**255**
	10	0	0	6	19	26	**51**	**224**	87,84	**255**
Total Score		**0**	**1**	**33**	**264**	**212**	**-**	**2217**	**86,94**	**2550**
Average Score								**221,7**	**86,94**	**255**

Source: Primary Data Processed (2021)

From the calculations in Table 11, the total score obtained is 2217 or 86.94% of the total ideal score. These results state that respondents assessing audit quality is in the very good category. Thus, the quality the audit of the auditors at the BPKP Papua Province Representative was very good. Audit quality determined from the management of the audit function, scope of assignment, planning assignments, implementation of assignments, and communication of assignment results.

4.5 Quantitative Analysis Results

A. Correlation Test Results

Tabel 12. Correlation Test Results

Relationship between variables		***Pearson* Correlation Test**	
Independent Variable	**Dependent Variable**	**R**	**R^2**
Competence (X1)	Audit Quality (Y)	0,876	0,767
Independence (X2)			
Ethics (X3)			

Source: SPSS Data Processing (2021)

The results of the correlation test in Table 12, it is known that the value of the correlation coefficient R is 0.876 or 87.6% so that the relationship between the three independent variables (Competence (X1), Independence (X2), Ethics (X3)) with one the dependent variable (Audit Quality (Y)) is categorized as strong positive. The value of the coefficient of determination or R-Square (R2) is 0.767 or 76.7%. While the remaining 0.233 or 23.3% is explained by the independent variable others that were not tested in this study, and are indicated by the symbol e *(error)*.

B. Simultaneous Effect Test (F Test)

Table 13. Simultaneous Effect Test Results (Test F)

Relationship between variables	***ANOVA* Test**

Independent Variable	Dependent Variable	R	R^2
Competence (X1)	Audit Quality (Y)	51,682	0.000
Independence (X2)			
Ethics (X3)			

Source: SPSS Data Processing (2021)

Based on Table 13, the F-count value is 51.682 with significance 0.000. In fact, F-count (51.682) is greater than F-table (2.8024) or the significance value obtained (0.000) is smaller than the significance level set (0.05). It can be concluded that H1,a is accepted (H1,0 is rejected) which means that competence, independence and ethics simultaneously affect the quality audit on auditors at BPKP Papua Province Representative.

C. Partial Effect Test (t Test)

Table 14. Partial Test Results (t Test)

Relationship between variables		Regression Test		
Independent Variable	**Dependent Variable**	**β**	**t- count**	**Significance**
Competence (X1)	Audit Quality (Y)	0,051	0,437	0,664
Independence (X2)		0,289	2,120	0,039
Ethics (X3)		0,596	5,403	0,000

Source: SPSS Data Processing (2021)

Effect of variable X1 on variable Y

Based on Table 14, the t-count value is 0.437 with significance of 0.664 then H2.0 is accepted (H2,a is rejected) which means that competence does not have a partial effect on audit quality. This research is in line with research conducted by Anggraini & Sapariyah (2019), which shows that auditor competence has a positive but not significant effect on audit quality, this is supported by research (Mutmainah et al., 2020) which states that stating that the competence variable has an effect negative and insignificant to audit quality. It can be said that all auditors at the Papua Province Representative Office of BPKP are competent in perform their duties and obligations as an auditor.

Effect of variable X2 on variable Y

Based on Table 14, the t-count value is 2.120 with significance of 0.039. H3,a is accepted (H3,0 is rejected) which means that independence positive and significant effect on audit quality. Thus, the better the independence of the auditor, the better the audit quality.

In research conducted by Rivani (2018), it is explained that independence has a significant effect on audit quality. This is in line with research conducted by Mardijuwono & Subianto (2018) that independence is positively related to audit quality.

Based on the results of the research above, that independence is very important for an auditor in carrying out his duties. So the higher the level of independence of an auditor, the better the audit quality will be.

Effect of variable X3 on variable Y

Based on Table 14, the t-count value is 5.403 with significance 0.000. H4,a is accepted (H4,0 is rejected) which means that ethics has an effect partially on audit quality. Thus, the better the ethics owned by the auditor it will be able to improve the quality of the audit.

Based on research conducted by Fitriani (2018) states that ethics has a significant effect on audit quality. That matter supported by research conducted by Arumega (Zarefar et al., 2016), which concluded that ethics affects audit quality.

It can be said that an auditor must have and comply with ethics profession in carrying out their duties as an auditor, so that when auditing auditors work in accordance with established regulations.

5.Conclusion

1. Based on the results of descriptive analysis, that of the four variables studied, the highest response rate was given to the Ethics variable (X3) with an average score of 88.48%, which means that generally respondents consider ethics to be a the most important factor that every auditor must have, where ethics determined by personality, professional skills, responsibility and implementation of the code of ethics.
2. Competence, independence and ethics simultaneously affect quality audit at BPKP Papua Province Representative.
3. Competence does not partially affect the quality of the audit on the auditor in BPKP Papua Province Representative. Thus, high or low auditor competence is not a factor that determines the quality of audit results.
4. Independence partially influences audit quality at BPKP Papua Province Representative. Thus, the better the auditor'sindependence it will be able to improve the quality of audit results.
5. Ethics has a partial effect on audit quality at BPKP Representatives Papua Province. Thus, the better the auditor'sethics will be improve the quality of audit results.

6. Research Suggestions and Limitations

Theoretically, the results of this study can be used as a contribution for the development of science in the field of accounting, especially in the field of auditing. Practically, the results of this study can be used as input for government agencies especially to the auditors at the BPKP Papua Province Representative, that the ethics of auditors must be is upheld because it is the most dominant variable influencing audit quality.

The limitation of this research is that the respondents are only in BPKP Representatives of the Papua Province so that they cannot generalize the situation of all auditors in the province the BPKP office and researchers cannot determine with certainty what factors are affect the quality of the audit because of the limitations of the variables that the researcher took.

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Extracting the Dimensions of Blockchain-for-food Using Semantic Network of Keywords

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Abstract

This work presents methods for exploring the lexical structure of the Concept of Blockchain Technology adoption in the Food Industry, using network visualisations of corpus-derived grammatical relations and word associations. The conceptual relations consist of keywords connected by category indicating the cluster of relations between words, as measured by pointwise mutual information of different types of keywords extraction methods. The first questions to be answered is how in each method (TF-IDF and TextRank) the extracted dimensions networked then showing specific semantic network. The second question to be answered is whether there is consistency among dimensions proposed by the Authors compares to dimensions extracted using the other two different methods. Thirteen Articles is the data collection sources, through which Abstract, Author Keywords, and Conclusion are combined as primary text data. The combined Abstract and Conclusion is further become the textual source where keywords are extracted using TFIDF and TextRank methods. The extracted keywords from the three methods (from Author's, TFIDF, and TextRank) are then visualized in three respective graphs using Gephi. The three graphs are partitioned based on degree centrality and eigenvector centrality to represent the universe of dimensions extracted from the thirteen articles. The findings show that blockchain technology implemented in the Food Industry reveals different dimensions depending on the method used (either Author's keywords, TFIDF, or TextRank). The list of dimensions where the three methods agree are: food security and policy, food supply-chain integrity, food certification and distribution traceability, and food supply chain risk. Graph partition based on eigenvector centrality shows that food safety and food supply chain integrity share a dominant role. This study sheds light on how researcher perceived blockchain technology adopted for food supply chain system can enhance effectiveness and efficiency in the respective Industry. From a theoretical perspective, this work provides preliminary result for more thorough research on how blockchain would play greater roles in many aspects of food sustainability and distribution in the future.

Keywords: Blockchain, dimension, TFIDF, TextRank, food supply chain.

JEL Classification: M21

Introduction

Segev, in his opening of his book 'Semantic Network Analysis In Social Sciences' (2021), says that "Semantic Network Analysis in Social Sciences introduces the fundamentals of semantic network analysis and its applications in the social sciences." Semantic Network Analysis is particularly useful today with the increasing volumes of text-based information available. It helps readers learn the mapping the main themes appearing in the text and the revealing of its main narratives and biases. It is one of the developing, cutting-edge methods to organize, identify patterns and structures, and understand the meanings of our information society. In the same tone as Segev, where it all started ten years ago, Lu (Nuno Miguel Almeida Lu, Semantic Social Network Analysis, 2010) in his Thesis, has indicated that

Semantic (Social) Network Analysis was a new methods and tools that filled the gap between the new social and semantic web technologies, and served as well as established and accepted social network analysis method. Semantic Network Analysis and Semantic (Social) Network Analysis have similarity that both bring forward the technique and measures introduced in Graph Theory. Both use network vertices and edges with new methods and tools that fill the gap between the new social and semantic web technologies, and well established and accepted social network analysis methods are required different naming for the vertices. In Semantic Network Analysis, vertices represent words or tokens, while in Semantic (Social) Network Analysis it represents actors or people. Previously, Helbig (Helbig, 2006 in Drieger, 2013) stated that Semantic Network Analysis opened up a basis for knowledge modeling and representation by providing an adaptable formal framework for scientific developments and applications. He advanced Sowa (Sowa,1991in Drieger, 2013) who had prior that Semantic networks allowed to model semantic relationships that were represented in a graph with labeled nodes and edges. Graph theory (Diestel, 2005) and network analysis (Brandes, 2005; Newman, 2010) allowed to process and analyze networks formally. One example of Semantic Network Analysis is in Contested Political Concepts (Nulty,). Other excellence examples of application such as news coverage of threats, narratives in newspapers, social sentiment, comparative analysis of speeches, international discourse, Twitter, WhatsApp communication, literature, patterns in communication science are in Segev's book.

In this work, Semantic Network Analysis will be used to extract the dimensions of blockchain technology implemented in Food Industry. Blockchain technology has been introduced to food industry for years now. It covers a number of cases, however learning from actual implementation, it is mostly implemented by the Retail Corporations as well as Food Companies for several purposes such as Improving Food Traceability, Ensuring Food Safety, Food Industry Supplier Selection, Meeting Operational Demands, Improved Inventory Management, Prevents Price Coercion, Eliminating Counterfeit Products, Reducing Food Waste, Provide Food Supply Chain Provenance, and Proving Label Claims (Short, 2020).

While blockchain's functions in sustaining food supply chain has been identified, it is not known how the function oneself is distinct from another. For example, ensuring food safety will also involving traceability and inventory management. Reducing food waste will also involving labelization as well as price coercion. It seems that each function which represent one dimension in block-chain-for food concept relates to another dimension in interconnected manner. It is insightful to investigate how those dimensions relates each other. Semantic analysis technique is the best way to see interconnection among those dimensions as dimensions can be considered as keywords to the conceptual application of blockchain-for-food.

This work, while extracting unique keywords, will also investigate the interconnection among those keywords for the case of blockchain-for-food concept of implementation. This work tries to verify whether the network of keywords consist of separable cluster, in which every cluster represent unique

dimension or function. Firstly, thirteen articles, used as data sample, are chosen carefully so that each article is representing specific application of blockchain-for-food, as indicated by Author's keywords. Secondly, this work then employs two methods (TF-IDF and TextRank) for exploring the lexical structure of the Concept of Blockchain Technology adoption in the Food Industry from those thirteen articles, using network visualisations of corpus-derived grammatical relations and keyword associations. The conceptual relations consist of keywords connected by category indicating the cluster of relations between words, as measured by pointwise mutual information of different types of keywords extraction methods. The first questions to be answered is how in each method (TF-IDF and TextRank) those extracted dimensions networked then showing specific semantic network. The second question to be answered is whether there is consistency among dimensions proposed by the Authors compares to dimensions extracted using the other two different methods.

Literature Review

This work review three important fundamental theories. First, the very fundamental theory in Semantic Network Analysis is Graph theory. In Graph theory, a graph G is a mathematical object consisting of a finite nonempty set of vertex called vertices v(G) , and a set of edges e(G). An edge is two-element subset of the vertex set. The terms "vertex" and "edge" come from geometry, as they can be used to represent the geometric objects with the same names. Multiset e(G) and a finite nonempty set of vertices v(G) form multigraph. This basic multigraph is then applied to text visualization together with its measures such as degree, centrality, and clustering coefficient. Network is an application of Graph theory on real case, and in this case, it is interconnection of words, or phrases in text. The summary of Graph measures used in Semantic Network Analysis is given in Table 1 (Drieger, 2013). The term Node in Network in Table 1 is equivalent to vertex in Graph theory, while edge in Network is edge in Graph. Table 1 presents basic elements in semantic network analysis. A network structure consists of nodes and edges. Nodes have a position in the network and can be characterized as global or local hubs. Subgraphs are parts of a network structure, e.g. the neighbourhood of a node. Clusters are subgraphs that contain strongly connected nodes. Element of network has been described in lengthy fashion by Drieger (2013).

Table 1. Semantic network analysis and exploration for qualitative and quantitative interpretation of semantic network elements.

Element	Quantity	Quality
Network structure	Statistics like degree distribution	Characteristic topological properties of the network.
Edges	Weight	Collocation, semantic relation, meaning.
Paths	Length	Set of connected semantic relations.
Nodes	Degree ($d(v)$)	Complexity of a semantic concept on word basis. Position in a semantic field.
Hubs	Centrality measures, filtering ($d(v) \geq n$)	*Global* importance of a node relative to the network. Node position in a *local* context, e.g. connection between complex semantic concepts or topics.
Subgraphs	(see network structure above)	Complex semantic context encoded in interconnected semantic fields.
Clusters	Clustering coefficient; filtering ($d(v) \leq n$)	Strongly connected components encoding specific semantic topics or complex concepts.

Source: (Drieger, 2013)

One important measure regarding interconnection is hub. Hub is of global importance since it provide position of context, in this case the importance of such node or vertex in the connection between semantic concepts. The importance of position is given by measure of centrality. Figure 1 shows two important measures in centrality map. One being betweenness centrality, which is fraction of all shortest paths in the graph that pass through a node. Nodes with high values of betweenness centrality participate in large number of shortest paths. The other one, eigenvector centrality measures the importance of a node in a graph as a function of the importance of its neighbours. The two variables are plotted against each other to see their relationship. Nodes mapped in plane created by Betweenness and Eigenvector centralities shows their importance relative to each other in shortest path as well as influence to their neighbours. The node with high Betweenness and Eigenvector centralities (top right-hand corner) dictates central roles for all the text documents.

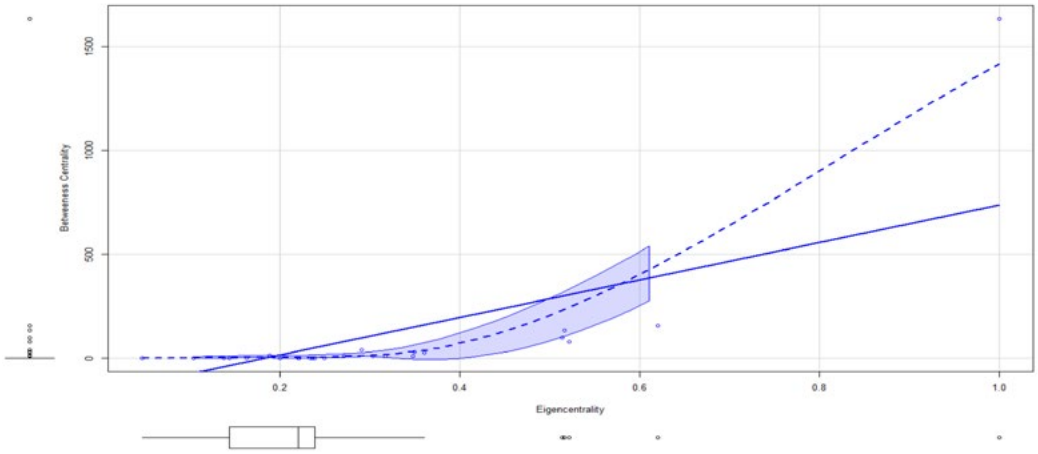
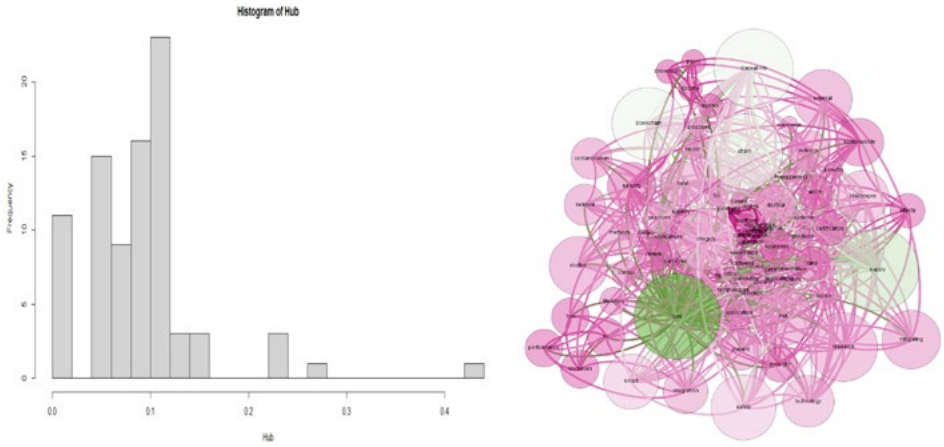


Figure 1. Plot of nodes in plan created by Betweenness and Eigenvector centralities shows two important measures in centrality map. Data taken from keywords extraction of thirteen articles using TFIDF.

Another important network measure is hub. Hub or connector hub is node with a high participation coefficient that is connected to many communities and is likely to facilitate global intermodular integration. Participation coefficient quantifies the relation between the number of edges connecting a node outside its community and its total number of edges. Its calculation requires a previously determined community structure. Community structure represents the semantic structure of dimension derived from text network. Figure 2. shows Histogram of Hub and its corresponding graph. Figure 2 (a) shows how participation scores are distributed in a network text. Only small number of nodes shows participation score higher than 0.4, while the bulk of nodes is in the range between 0 and 0.2. Figure 2 (b) shows a network whose participation scores are drawn in Figure 2 (a). The circle in green is the node with hub score greater than 0.4, while circles in graded lilac represent nodes those hub scores are in the bulk of histogram in Figure 2 (a). The circle in mild green is mid value between the bulk and the top participation hub score.



(a) (b)

Figure 2. (a) Histogram of Hub. And its corresponding graph (b). Data taken from keywords extraction of thirteen articles using TFIDF.

Other important Network measures concerning prominent nodes and that evaluate community quality, and perform positional analysis are explained by Luz (2010) in his dissertation.

Second, another important fundamental theory required in this work is keyword extraction method. There are several methods for keyword extraction as pointed out by Beliga (2015). Those methods are supervised, semi-supervised, and unsupervised. Unsupervised method is further divided into simple statistics, linguistic, graph-based, and other. In statistical approach, the statistics of the words from document can be used to identify keywords. TF-IDF is one of statistical approach and one among popular techniques employed in text mining. Linguistics approach basically uses the linguistics feature

of the words, sentences as well as document. Machine learning approach prefers supervised learning from the training datasets for keyword extraction. However, unsupervised learning approach is also gaining popularity, especially the one that employ graph-based method. Graph-based text representation which enables exploration of the relationships and structural information within the document or text very effectively. In this work, TF-IDF is selected to extract keywords for the reason of its simplicity of the concept as well as its popularity. This work also employs one subspecies of graph technique call TextRank as comparative to statistics approach. TextRank is network measures used for the extraction as a result of modification of algorithm derived from Google's PageRank (Brain and Page, 1998) and is based on eigenvector centrality measure and implement concept of "voting".

TF-IDF weighting is calculated as a product of TF and IDF. Term Frequency (TF) defines the frequency of a given term in each text or document. Inverse Document Frequency (IDF) assigns higher weights to words that occur only in few documents. The said words serve for discriminating document/text from each other in the corpus. TF and IDF are formulated using the following equation:

Type equation here.$TF_{i,j} = n_{i,j} / \sum_k n_{k,j}$ (1)

$$IDF_{i,j} = \log |D| / |d_j \in D : t_j \in d_j| \quad (2)$$

$$\text{TF-IDF} = \text{TF}*\text{IDF} \quad (3)$$

Where $n_{i,j}$ represents the number of occurrences of word t_i in document d_j and $\sum_k n_{k,j}$ represents a total number of occurrences of words in document d_j. K and D are the number of keywords and documents (i.e., papers), respectively. TextRank is an unsupervised graph-based technique used to extract the summary of a text. It uses the theory behind the Pagerank algorithm, a Google graph-based ranking algorithm. The process in TextRank consists of fifteen steps (Thushara Mg et.al, 2019) depicted in Table 2. It starts with Data Cleansing which main functions are Transformation and Tokenization. During tokenization, text can be labeled based on word position in the sentence called POS Tag. The complet process can be learned from Table 2. Basically, TextRank functions by creating a graph of the interconnected words from a document, it further identifies the most important nodes of the graph (words) based on importance scores calculated recursively from the entire graph (Mihalcea and Tarau, in Baruni and Sathiaseelan, 2020). The formula used for scoring a vertex represented by i is:

$$score[i] = (1-d) + d\,[Sum(j)((\frac{weighted\ edge[i][j]}{inout[j]})\ score[j])] \quad (4)$$

where j belongs to the list of vertices that has a connection with i. d is the damping factor.

Table 2. The process in TextRank consists of fifteen steps (Thushara Mg et.al, 2019).

Step	Activity	Description
1)	Data Cleansing:	Transformation: Lowercase, Remove accents, Parse html, Remove urls Tokenization: Word Punctuation, Whitespace, Sentence, Regexp: Pattern: \w+, Tweet Filtering: Lexicon, Regexp
2)	POS Tagging:	A Part-Of-Speech Tagger (POS Tagger) is a piece of software that reads text in some language and assigns parts of speech to each word (and other token), such as noun, verb, adjective, etc., although generally computational applications use more fine-grained POS tags like 'noun-plural'
3)	Lemmatization:	Lemmatization replaces the tokens (mainly nouns and adjective) with its basic lemma or root word. For example, 'cats' will be replaced by cat'.
4)	POS tagging for Lemmatized text:	Tagging parts of speech for the lemmatized text.
5)	POS Based Filtering:	If any word is found not to be noun, adjective or gerund after POS tagging for lemmatized text, that word is considered as stop word. Punctuations are also considered as stopwords.
6)	Stopword list generation and Stopword removal:	Filtering: Stopwords
7)	Creating Vocabulary:	After preprocessing the text, unique words will form vocabulary.
8)	Graph Building:	TextRank is a graph-based model, each word in the vocabulary acts as a vertex for the graph. The information of connection between the vertices is present in the weighted edge matrix. Weighted undirected edges graph is built. Information about the connections (edges) between all vertices will be present in the weighted edge matrix. Weighted edge[i][j] represents weight of the edge between the word vertex represented by vocabulary index i and the word vertex represented by vocabulary j.
9)	Summation of weights of edges connected to a vertex:	inout[i] represents the total number edges connected with that particular vertex represented by i.
10)	Vertices score calculation:	Scoring the potential candidate Keyphrase: The formula used for scoring a vertex represented by i is: $score[i] = (1-d) + d\,[Sum(j)((\frac{weighted\ edge[i][j]}{inout[j]})\ score[j])]$ where j belongs to the list of vertices that has a connection with i. d is the damping factor.
11)	Phrase Partitioning:	Partitioning lemmatized text into phrases using the stopwords in it as delimiters. The phrases are also candidates for key phrases to be extracted.
12)	Listing unique phrases:	Removing repeated phrases/ keyphrases.
13)	Minimizing the list of candidate keyphrases:	Single word keyphrase which are present in multi-word key phrases can be removed.
14)	Scoring Keyphrases:	Adding the score of individual word in a phrase will give the score of key phrases.
15)	Sorting Keyphrases based on score:	Sorting the key phrases based on its scores will help to find most relevant key phrases of the document.

Compared to TF-IDF, TextRank approach might not give keywords those best describes the concepts elaborated in the research document. However, it may do better in location of more structured document, such as Abstract or Introduction, in which keyphrases appear mostly (Hasan and Ng, 2017, in Thushara Mg et.al, 2019). The concept of the position rank is to assign larger probabilities to the words which frequently occurred in early positions of the document (Florescu and Caragea, 2017). The Journal's Articles are structured document, then the use of TextRank is justified.

Third, last theory is general theory of blockchain. The International Telecommunication Union (ITU, 3/2021) defines blockchain as "*Blockchain is an open and shared distributed ledger technology (DLT), which can record transactions between two parties efficiently, permanently and in a verifiable way. It consists of a shared digital data storage, replicated and synchronized across multiple devices in a network.*"

Since the creation of technology, alongside bitcoin, by the presumed pseudonym Satoshi Nakamoto, blockchain has been undergoing tremendous adoption worldwide. Nakamoto, wanted a decentralized, permanent, and public means of recording the creation and distribution of every bitcoin. Following bitcoin, generally regarded as first generation blockchain, entered Ethereum. Unlike 1st generation bitcoin technology which can only allow to send, to receive and to trade, Ethereum brought innovative smart concept of smart contracts. Smart contract facilitates the parties involved to draw up the conditions to agree upon. The agreement then triggers the contract. Ethereum is said to be 2nd generation of blockchain technology. The next generation, called 3rd generation of blockchain was introduced as Cardano (https://cardanotec.com/2021/02/26/what-is-cardano-ada-the-best-3rd-generation-blockchain/), Polkadot (https://cryptopotato.com/what-is-polkadot/) and Ethereum 2.0 (https://ethereum.org/en/eth2/vision/). The 3rd generation blockchain offers scalability, interoperability, and sustainability (Gandhi, 2018).

Enterprises across the industry are building platform based on blockchain technology. Multiple use cases have been explored. Platform for Use-cases which are currently offered are, not limited to EOS (https://eos.io/), Hyperledger Fabric (https://hyperledger.org/projects/fabric), Quorum (https://www.jpmorgan.com/global/Quorum), and a lot more. Start-ups such as Filament (https://builtin.com/company/filament) offers internet of things, Algorand (https://builtin.com/company/algorand?ni=6) for money transfer, and many more. Use cases in food industry has also been attracting attention lately. Organizations implement blockchain technology for several purposes such as Improving Food Traceability, Ensuring Food Safety, Food Industry Supplier Selection, Meeting Operational Demands, Improved Inventory Management, Prevents Price Coercion, Eliminating Counterfeit Products, Reducing Food Waste, Provide Food Supply Chain Provenance, and Proving Label Claims (Short, 2020).

This work, while focusing on blockchain implementation for food supply chain, selects thirteen articles, each article already discusses specific purpose on blockchain utilization. Those are depicted in Table 3.

Table 3. List of selected articles

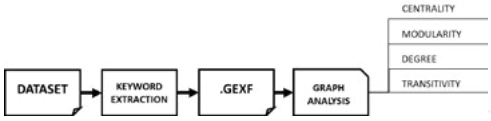
Article Id	Source	Designated Use Case Dimension	Author's keywords
1	(Clapp et.al, 2020)	Sustainability	Food policy, Agency, Sustainability
2	(Yuan et.al., 2020)	Traceability	Food traceability system, Perceived value, Purchase intention, Consumer expertise
3	(Casino et.al, 2019)	Traceability	supply chain and network supply, supply chain management, industry 4.0
4	(Davidson et.al., 2016)	Safety, security	Food safety, Food security, Fraud, terrorism, Food defense, Public perception
5	(Ali et.al, 2014)	Integrity	Halal Food Integrity Risk, Supply Chain Integration
6	(Xu et.al., 2020)	Safety	Pesticide, veterinary drugs, heavy metal, hormone, antibiotic, adulteration
7	(Ali et.al., 2017)	Integrity	Halal, Supply chain integration, Food integrity, Food supply chain integrity
8	(Schleifera & Sun, 2019)	Sustainability	Sustainability certification, Voluntary standards, Private governance, Local food security, Agriculture, Developing countries
9	(Yua et.al., 2020)	Traceability, safety	Food traceability, food supply chain, sensor and indicator, internet-of-things (IoTs), food safety
10	(Hu et.al., 2017)	Recall	Product recalls, Organizational legitimacy, Fairness heuristic theory, recall norms, Recall strategy, Two-factor theory
11	(Feng et.al, 2020)	Traceability, sustainability	Traceability, Blockchain technology, Security and transparency, Food sustainability
12	(Bumblauskasa et.al., 2019)	Distribution	Blockchain, Supply Chain Management Technology & Innovation, Food Distribution
13	(Yadava, et.al., 2020)	Barrier	Agriculture Supply Chain, Blockchain Barriers, ISM, DEMATEL

Table 13 shows eight motives why blockchain-for-food technology implemented. The motives are not directly apparent but might be guessed among the keywords. Those motives are assigned from Author's keywords: traceability, safety, security, integrity, sustainability, recall, distribution, and barrier. While the motives, hereinafter designated as dimensions of blockchain-for-food, are distinct, the development of each article shows variety of keywords. It suggests that the dimensions might have extended taxonomy. It is insightful to extract keywords from the document to investigate the inner shape of taxonomy of blockchain-for-food derived from thirteen articles in Table 3 as well as its generality.

Click or tap here to enter text.

Methods

The procedure of the study is depicted in Figure 3. It consists of two steps: keyword extraction and graph/semantic analysis. Dataset is formed from collection of thirteen articles in Table 13. It contains Article ID, Abstract, Conclusion, and Author's version of keywords. The screen capture of dataset is shown in Figure 3b. The dataset is then fed as input to keyword extraction process. The filtering of words (keywords) adopts the techniques describes in literature review. Those two algorithms are TFIDF and TextRank in Python language. The two algorithms are selected based on the different mechanism elaborated in previous section. It would be insightful to learn whether both algorithms produce contrasting outcomes. The extracted keywords for each article are then prepared for network visualization in Gephi format (.GEFX) using package qdap (Rinker et.al., 2014) and geomnet (Tyner, 2020) from R language community (CRAN). From Gephi, the measures graph centrality, modularity, degree, and transitivity can be derived. The visualized interconnected keywords provide means to semantic analysis.



In [4]: df

Out[4]:

	Doc	Reference	Abstract	Conclusion	Authors_Keywords	tf_idf
0	1	The case for a six-dimensional food security f...	The definition of food security has evolved an...	The concept of food security has never been st...	Food policy\nAgency\nSustainability\nFood syst...	NaN
1	2	The impact of food traceability system on cons...	Based on the involvement and customer-delivere...	First, the study found that the high-quality i...	Food traceability system, \nPerceived value, \...	NaN
2	3	Modeling food supply chain traceability based ...	Traceability has become a critical element in ...	In this paper,anovel FSC traceability modeling...	Efficiency \nAutomation Customer complaints\nR...	NaN
3	4	From food defence to food supply chain integri...	Consumer confidence in the European food indus...	Our food supply chain is complex and maintaini...	Food safety,\nFood security, \nFraud, Terroris...	NaN
4	5	Extenuating Food Integrity Risk through Supply...	Effects of food scandals on religious belief, ...	This study truly demonstrates that supply chai...	Halal Food Integrity Risk, \nSupply Chain Inte...	NaN
5	6	Application of blockchain technology in food s...	Blockchain technology is a distributed ledger ...	Blockchain technology has the characteristics ...	Pesticide; \nveterinary drugs;\nheavy metal; \...	NaN
6	7	Food supply chain integrity: the need to go be...	The purpose of this paper is to establish a co...	The model reveals that the strategy (i.e. SC i...	Halal, \nSupply chain integration, \nFood inte...	NaN
7	8	Reviewing the impact of sustainability certifi...	What is the impact of sustainability certifica...	The review shows that research on the impacts ...	Sustainability certification\n\nVoluntary standa...	NaN
8	9	REVIEW\nSmart traceability for food safety:\nZ...	Current food production faces a tremendous cha...	There is a critical need to develop a smart fo...	Food traceability; \nfood supply chain; \nsens...	NaN
9	10	Effect of different food recall strategies on ...	Using the combined theoretical umbrella of org...	In this study, we aimed to investigate the eff...	Product recalls, \nOrganizational legitimacy, ...	NaN
10	11	Review\nApplying blockchain technology to impr...	Traceability plays a vital role in food qualit...	Although blockchain technology has been hailed...	Traceability\nBlockchain technology\nSecurity ...	NaN
11	12	A blockchain use case in food distribution: Do...	This paper aims to explain the implementation ...	In this article, a use case has been presented...	Blockchain\nSupply Chain Management\nTechnolog...	NaN
12	13	Blockchain technology adoption barriers in the...	Recent outbreaks of food contamination scandal...	This study investigated the significant barrie...	Agriculture Supply Chain\nBlockchain Barriers\...	NaN

Figure 3 (a) Research procedure adopted in this study. (b) Screen capture of Dataset.

The network is constructed based on co-occurrence of keywords without considering the strength of connection between a pair of nodes. The graph is then only represented by contiguity matrix. There will be three group of graphs, each group constructed based on keywords extracted using TF-IDF, TextRank and keywords provided by the authors of the articles. Final analysis seeks to see the discrepancies among the three graphs.

Results

The procedure in Figure 3 (a) produces keywords shown in Table 4. Note that TF-IDF fails to produce keywords for article 7. Each technique is required to produce ten keywords. While TF-IDF tends to produce single-word keyword, TextRank produces n-gram keywords where n=1:2.

Table 4. List keywords extracted using TF-IDF and TextRank algorithm.

Article Id	Source	TF-IDF	TextRank
1	(Clapp et.al, 2020)	sustainability, food, dimensions, security, pillars, policy, insecurity, agency, widening	policy, food security, system, measure, formal, formally, agency, growing, dimension, level
2	(Yuan et.al., 2020)	traceability, fts, traceable, consumers	foods, consumer perceived, food traceability, value, safety, perceive, product, traceable, information, positively, positive
3	(Casino et.al, 2019)	fsc, traceability, blockchain, scalability, smart, multitier, modeling, blockchain, supply, kpis	fsc, traceability, food, chain, related, relatively, like, modeling, functional model, functions, provide, main, mainly
4	(Davidson et.al., 2016)	halal, mitigating, integration, integrity, risk, chain, supply, outsourcing, food, risks	food industry, contamination, contaminant, defence methods, deliberate, incident, chain, consumer, practice, practical
5	(Ali et.al, 2014)	blockchain, safety, food, challenges, technology, decentralization, literature, applications, encryption, validated	risk, integrity risk, integration, halal, food, supply, chain, belief human, truly, case
6	(Xu et.al., 2020)	NA	food safety, research, blockchain technology, development, literature, application, issue, review, reviewed
7	(Ali et.al., 2017)	certification, sustainability, socio, security, food, effect, impact, mechanism, defries	integration, integrity, integration, halal, result, model, performance, study, sc, significantly, significant
8	(Schleifera & Sun, 2019)	certification, sustainability, socio, security, food, effect, impact, mechanism, defries	research, researcher, effect, review, reviewed, certification, study, economic land, food, important, importantly
9	(Yua et.al., 2020)	traceability, food, smart, foodborne, cloud, technologies, detection, computing, safety	food, technology, critical, smart, safety, detection, iot, integrated, integrating, traceability, reader
10	(Hu et.al., 2017)	food, recall, legitimacy, norms, mediation, organizational, effectiveness, heuristic, compensation, consumer, perceived	recall, differently, different food recall, theory, consumer, effectiveness, effectively, effect, legitimacy, perspective, china

11	(Feng et.al, 2020)	traceability, blockchain, iot, functionality, flowchart, food, practitioner, solution, challenge, benefit	traceability, provide, provide valuable, solution, blockchain, food, researcher, research, based, technology, management, managing
12	(Bumblauskasa et.al., 2019)	blockchain, transparently, supply, chain, food, egg, implementation, traceability, accurately	paper aim, traceability, creating traceable, information, informed choice, research question, developing, actively developed
13	(Yadava, et.al., 2020)	blockchain, agro, asc, ism, barriers, stakeholder, constructs, stakeholders, adoption, micmac	modeled, model, modelling, blockchain, literature, organization, barrier, concern, food, interpretative, ism, agro

The list of keywords in Table 4, joint with those from Table 3, after being transformed into Gephi graph format are then presented by the following sub-topic: Nodes, Hub, an Sub-graph (community).

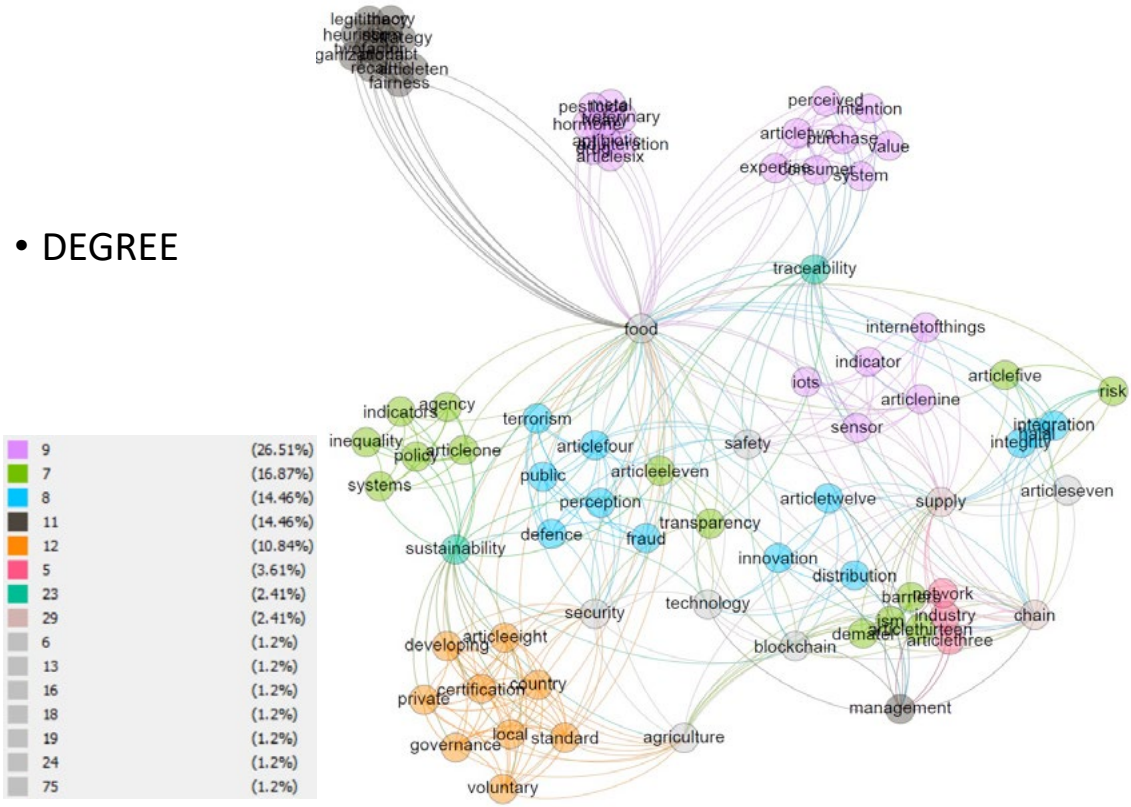
Nodes

The keywords act as nodes are characterized by degree which is total number of edges connected to a node. Degree indicates the amounts of adjacent nodes and measures a node's connectedness. The number of adjacent nodes provides qualitative insights in the diversity of a keywords's usage by the author as well as extracted which refer to the position in the underlying semantic network model. Their visualizations of degree are given in Figure 4. Colours in Figure 4 indicate degree quantization together with its respective frequency of occurrence relative in percent. Remark also that article id is positioned as node. For example, articleseven indicates Article Id 7. That helps pinpointing to which cluster a specific article belongs to as well as the hub to interconnect with other articles whether in the same or different cluster.

The three graphs form different groups. Articletwo, articlesix, and articlenine are grouped in Group 9 representing the greatest adjacent nodes (=26.51%), followed by Group 7 (articleone, articlefive, articlethirteen, =16.87%), then Group 8 (article four and articletwelve, =11.46%) and Group 11 (articleten, =11.46%) in Author graph. In TF-IDF graph, articlefour, articlefive, articlesix, articleten and articleeleven grouped into Group 10 representing 40.21% of adjacent nodes; articleone, articleeight, articlenine, and articletwelve are grouped into Group 9 (=24.74%); while articleten forms single group, Group 11 (=11.34%). TextRank graph shows the most complex structure in term of number of clusters created. The big three are Group 12 (=34.68%) adjacency, consists of articlethree, articlefour, articleeight, articleten, and articlethirteen; Group 11 (=29.03%) consists of articlefive, articlesix, articlenine, and articleeleven; and Group 13 (14.52%) consists of articleone and articletwo. The rest of groups in TextRank graph are rather scattered and do not include article id.

While the three graphs show different structure and complexity, however, there is sign of consistency among them. The three graphs agree on how central the role of the keyword 'food' and 'chain' which are global. Other keywords that the three graphs also agree on sub-central roles are 'traceability', 'sustainability', integrity', 'security', and 'safety'.

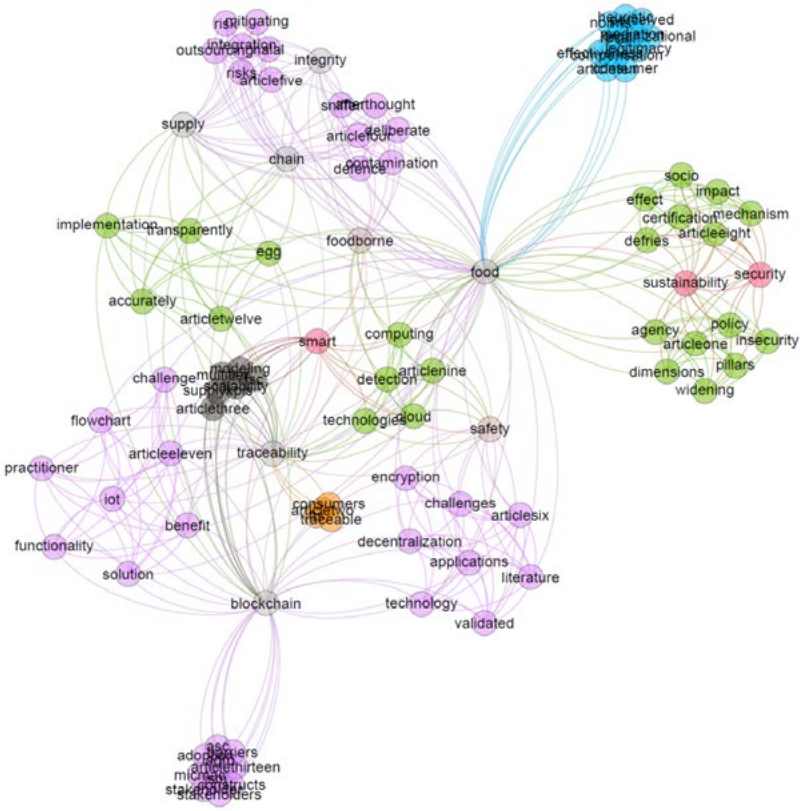
- DEGREE



(a) Authors' keywords

• DEGREE

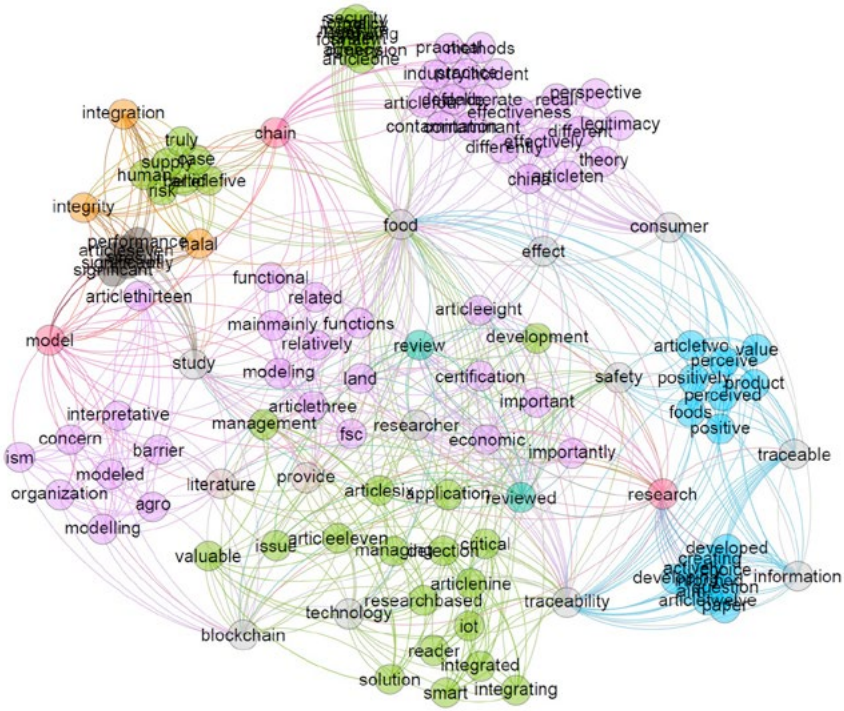
10	(40.21%)
9	(24.74%)
11	(11.34%)
8	(6.19%)
4	(4.12%)
16	(3.09%)
1	(2.06%)
18	(2.06%)
24	(2.06%)
17	(1.03%)
35	(1.03%)
43	(1.03%)
74	(1.03%)



(b) TF-IDF extracted keywords

• DEGREE

12	(34.68%)
11	(29.03%)
13	(14.52%)
10	(4.84%)
19	(2.42%)
33	(2.42%)
20	(1.61%)
21	(1.61%)
22	(1.61%)
24	(1.61%)
23	(0.81%)
28	(0.81%)
30	(0.81%)
31	(0.81%)
35	(0.81%)
52	(0.81%)
107	(0.81%)



(c) TextRank extracted keywords

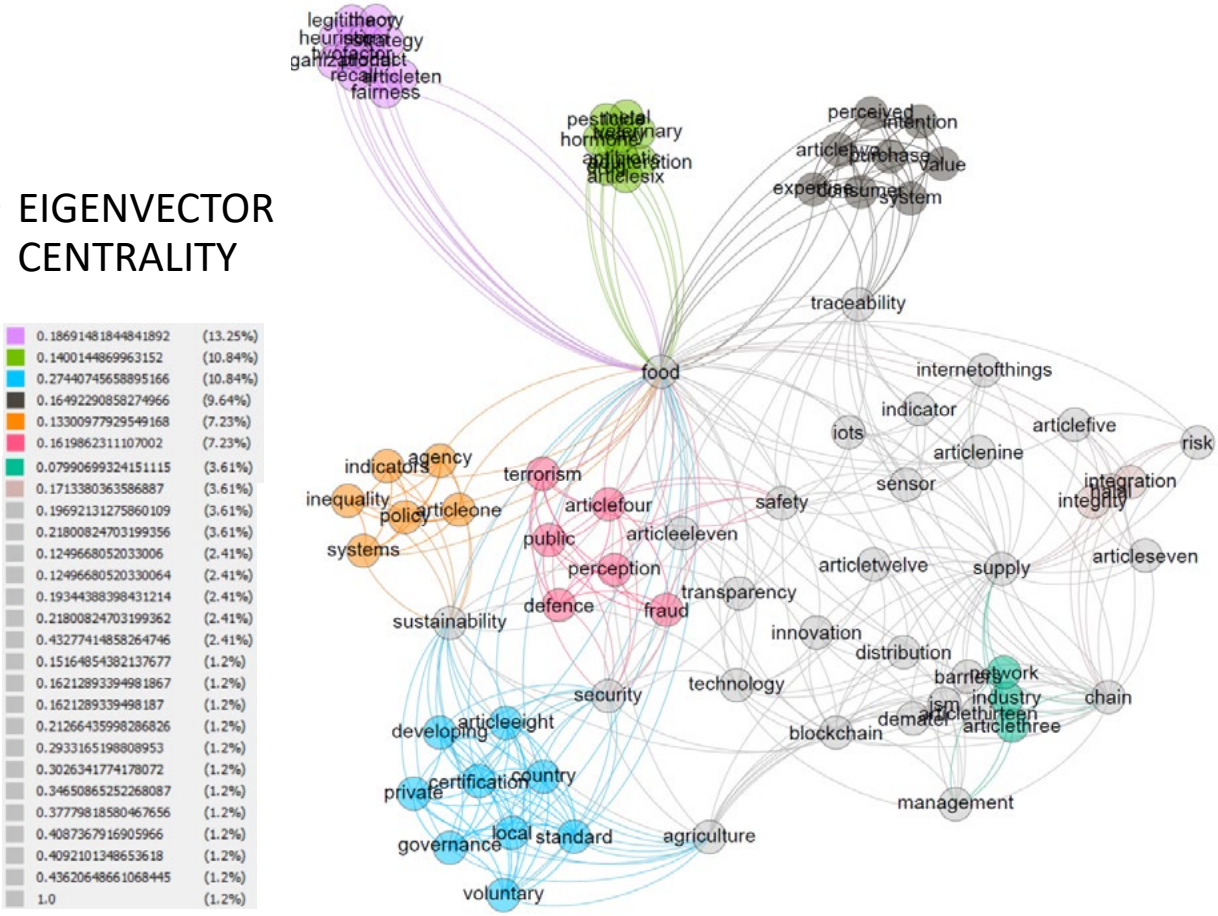
Figure 4. Visualization of keywords from authors and extracted using TF-IDF and TextRank based on degree measure associated with article identification.

In addition to the keyword ‘food’, graph Author also put ‘traceability’ central role for Article 2, 9, and 4; ‘supply’ and ‘chain’ central in Article 3, 5, 7, 9, 12 and 13; ‘sustainability’ in Article 1,4, and 8. Graph TF-IDF adds central role of keyword ‘sustainability’ in Article 1 and 8, ‘blockchain’ in Article 2, 3, 6, 11, and 13; ‘integrity’ in Article 4 and 5, ‘supply’ and ‘chain’ in Article 4, 5 and 12; ‘foodborne’ in Article 4 and 9, ‘safety’ in Article 6 and 9. Graph TextRank on the other hand reveals dissenting outcomes. The latter put keyword ‘consumer’ in Article 2, 4 and 10, ‘traceable’ in Article 2 and 12, ‘research’ in Article 8 and 12, ‘traceability’ in Article 2, 8, 9, 11, 12, and 13, ‘blockchain’ in Article 9, 11, and 13. Graph TextRank performs nearly meshed network. Those words showing high degree enfold a highly dis**c**riminated association with adjacent nodes and typically indicate local hubs in each semantic network. Given those set of high degree nodes, more complex semantic **c**ontexts are obtained from TextRank keywords extraction.

Hub

Hubs represent important nodes in a network and has been shown previously correspond to highly connected nodes. Centrality is employed to quantitatively characterize the importance of a node hub in a network (Wassermann & Faust, 1994; Brandes, 2005) and figured out as network graph in Figure 5. This work employs eigenvector centrality to measure the importance of a node in a graph as a function of the importance of its neighbors. If a node is connected to highly important nodes, it will have a higher Eigenvector Centrality score as compared to a node which is connected to lesser important nodes. Keywords with high eigenvector centrality act as global hubs indicating central nodes in a semantic network. Because Eigenvector centrality indicate the importance as hub, it creates greater number of groups compares to degree. Comparing the three graphs, it can be revealed what they agree and disagree on. Authors’, TF-IDF, and TextRank graphs agree that keyword ‘food’ is global hub, thus indicates frequently referred core issues as expected. Author and TF-IDF graph agree on the hub role of keywords ‘sustainability’, ‘traceability’, ‘security’, ‘safety’, while disagree on the keyword ‘integrity’. TextRank graph reveals the hub role of ‘traceability’, ‘safety’, and ‘integrity’. From eigenvaector point of view, the three graphs only agree on keyword ‘traceability’ and ‘safety’, while disenting importance on other dimensions (keywords).

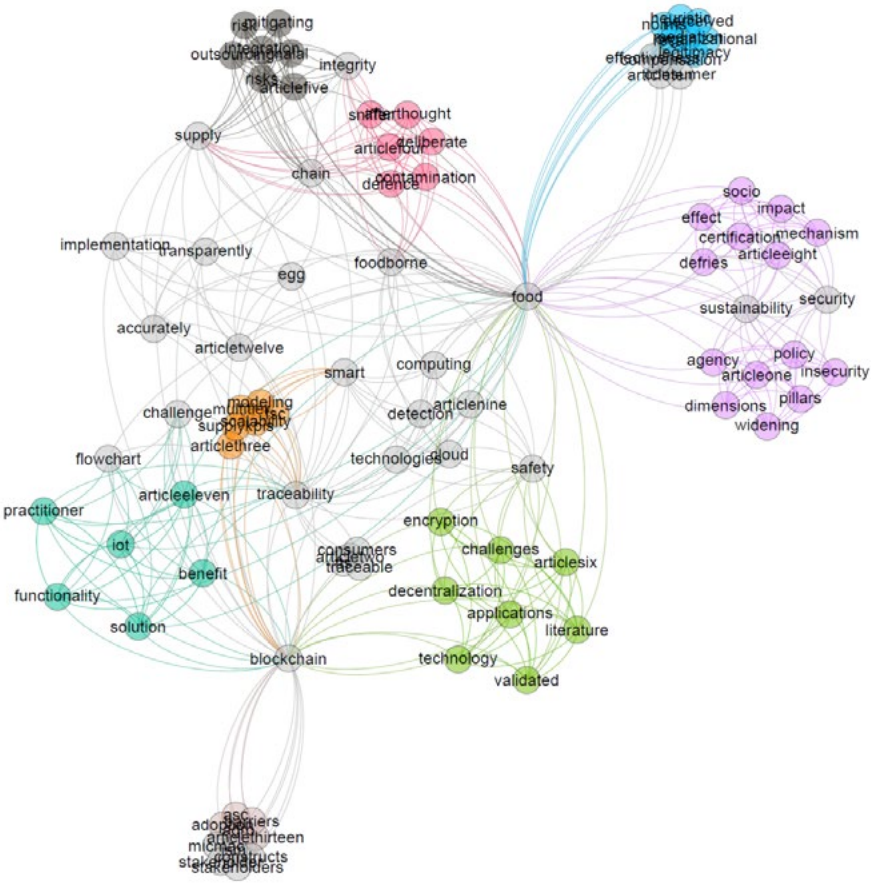
- EIGENVECTOR CENTRALITY



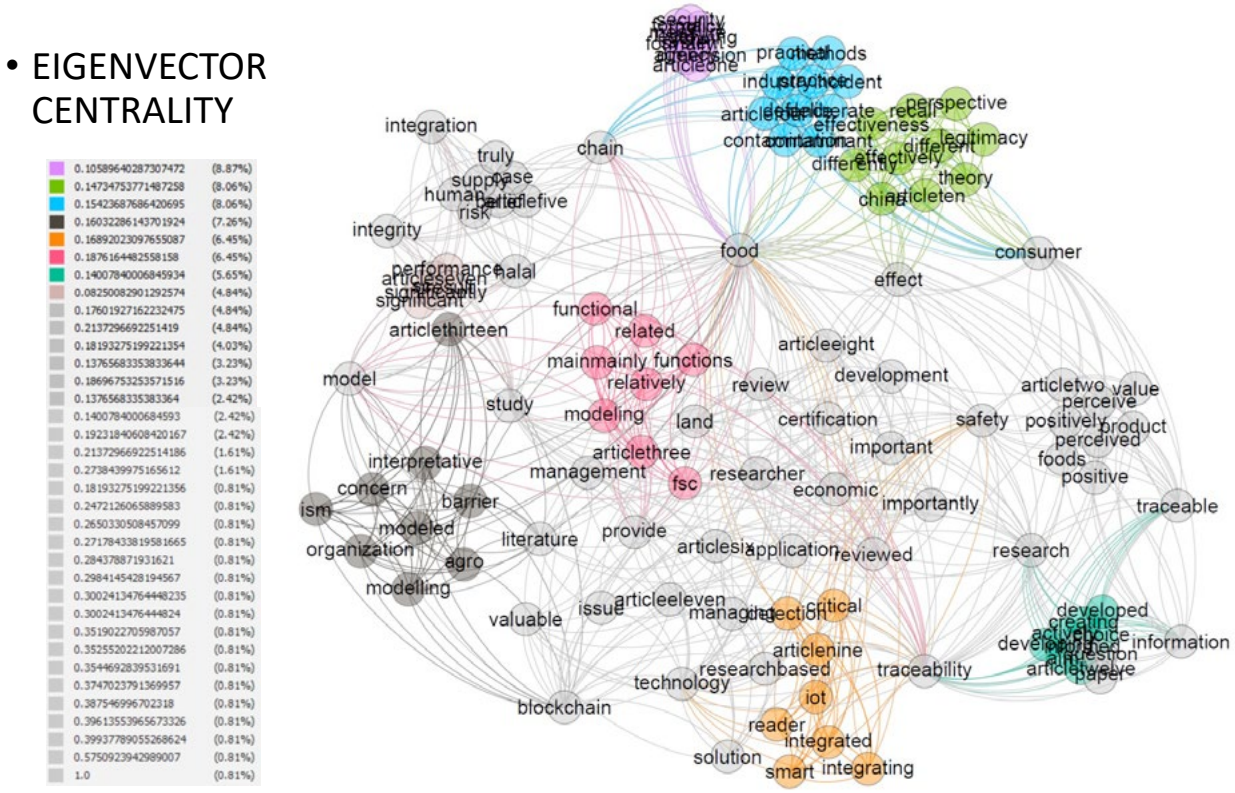
(a) Authors' keywords

- EIGENVECTOR CENTRALITY

0.14620124582994123	(14.43%)
0.20855077869687358	(8.25%)
0.17400605384301748	(7.22%)
0.2088440534063674	(7.22%)
0.12820796617685548	(6.19%)
0.21947459002708058	(6.19%)
0.22663147900631492	(6.19%)
0.10642032737568968	(5.15%)
0.1064203273756897	(5.15%)
0.20061925451105l7	(5.15%)
0.1740060538430175	(4.12%)
0.041552301005298824	(3.09%)
0.23996261219064552	(3.09%)
7.583610741615148E-4	(2.06%)
0.22663147900631495	(2.06%)
0.23996261219064557	(2.06%)
0.43677418681503544	(2.06%)
0.041552301005298234	(1.03%)
0.20915919752553302	(1.03%)
0.20915919752553305	(1.03%)
0.2828999299796521	(1.03%)
0.3038582542203496	(1.03%)
0.33256962338165136	(1.03%)
0.3430597208739528	(1.03%)
0.51701225512401 84	(1.03%)
0.5962567144747472	(1.03%)
1.0	(1.03%)



(b) TF-IDF extracted keywords.



(c) TextRank extracted keywords.

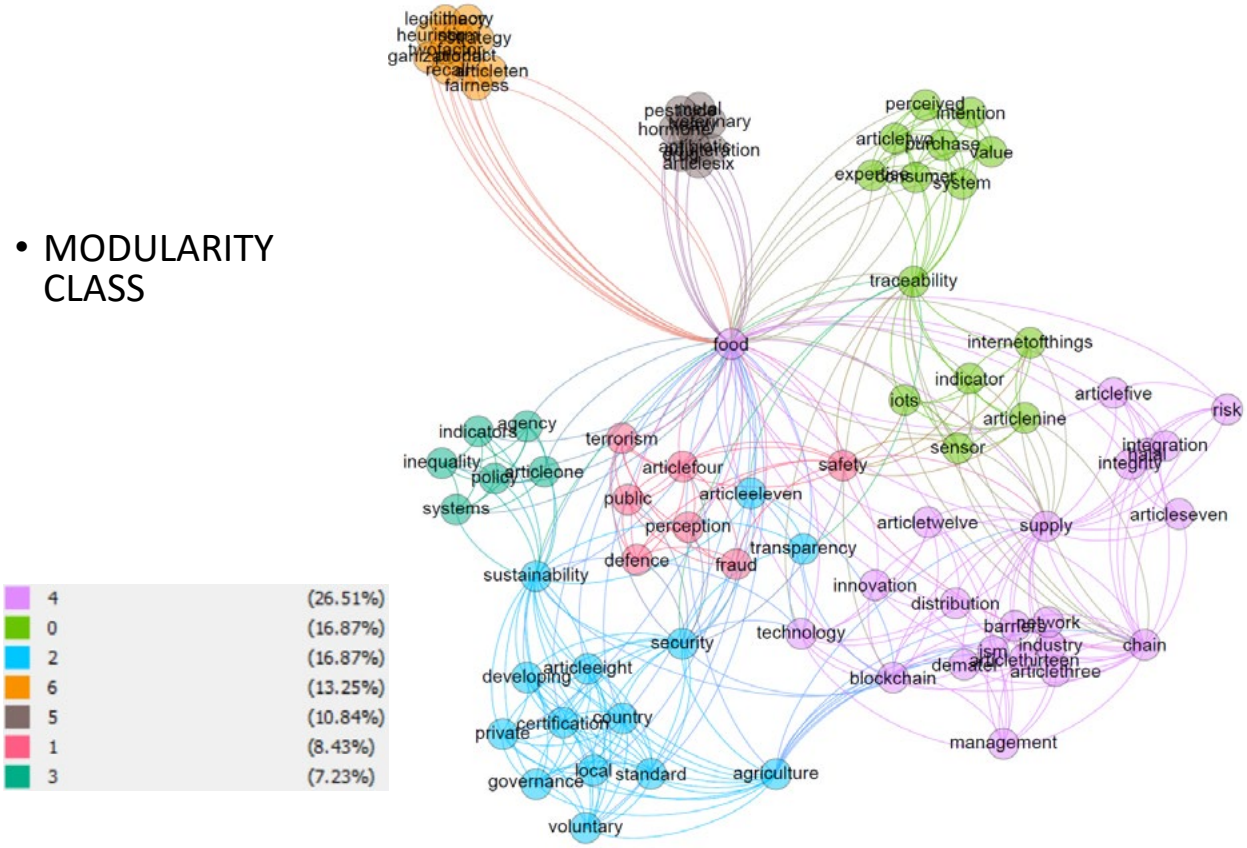
Figure 5. Visualization of keywords from Authors and extracted using TF-IDF and TextRank based on eigenvector centrality measure.

Local hubs represent abstract concepts that are frequently referenced from different contexts, in this case topic or dimension that this work is looking for. Local hubs may also act as a broker, connecting between more complex semantic concepts that include local word clustering (see figure 5). Figure 5 shows semantically high related topics which clearly reveals an abstract summary of the thirteen articles in the dataset referring to the most important dimensions. Those local hubs are security, chain, supply, traceability, sustainability, agriculture, blockchain, safety in graph Authors; blockchain, traceability, chain, supply, foodborne, safety, integrity in graph TF-IDF; traceability, safety, research, consumer, blockchain, chain, technology, model in graph TextRank.

Sub-graph

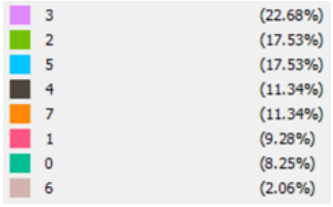
To explore the semantic contexts at a given node, the adjacencies of its adjacent nodes are expanded and displayed as a subgraph. Subgraphs describe parts of a given network according to a chosen subset of nodes and edges. The presence of subgraph in the semantic network is detected using modularity function in Gephi. Figure 6 illustrates semantic contexts in network constructed from Authors' keywords and extracted TF-IDF and TextRank based on modularity measure. Figure 6 shows how each network

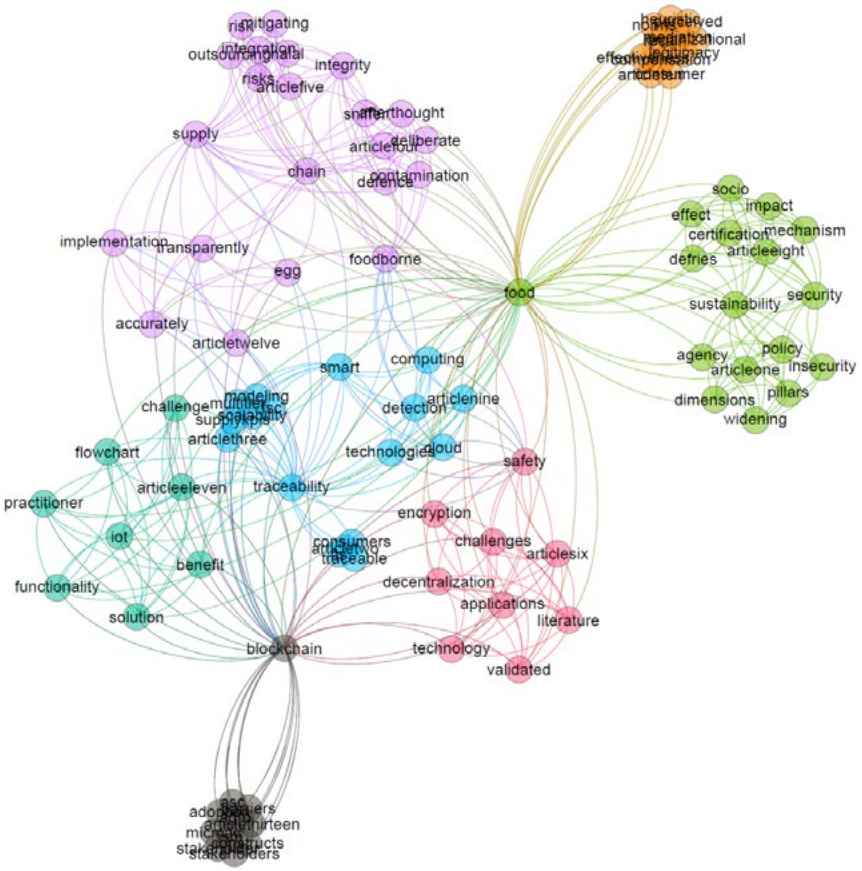
or graph is clustered. The clusters help to indicate concepts that represent special dimension this study seeks after. In relation to Figure 5, local hubs are mostly located between clusters to connect them as brokers, clusters and hubs complement each other in the interpretation. The hubs in eigenvector centrality and their adjacency interpret the concept of dimension.



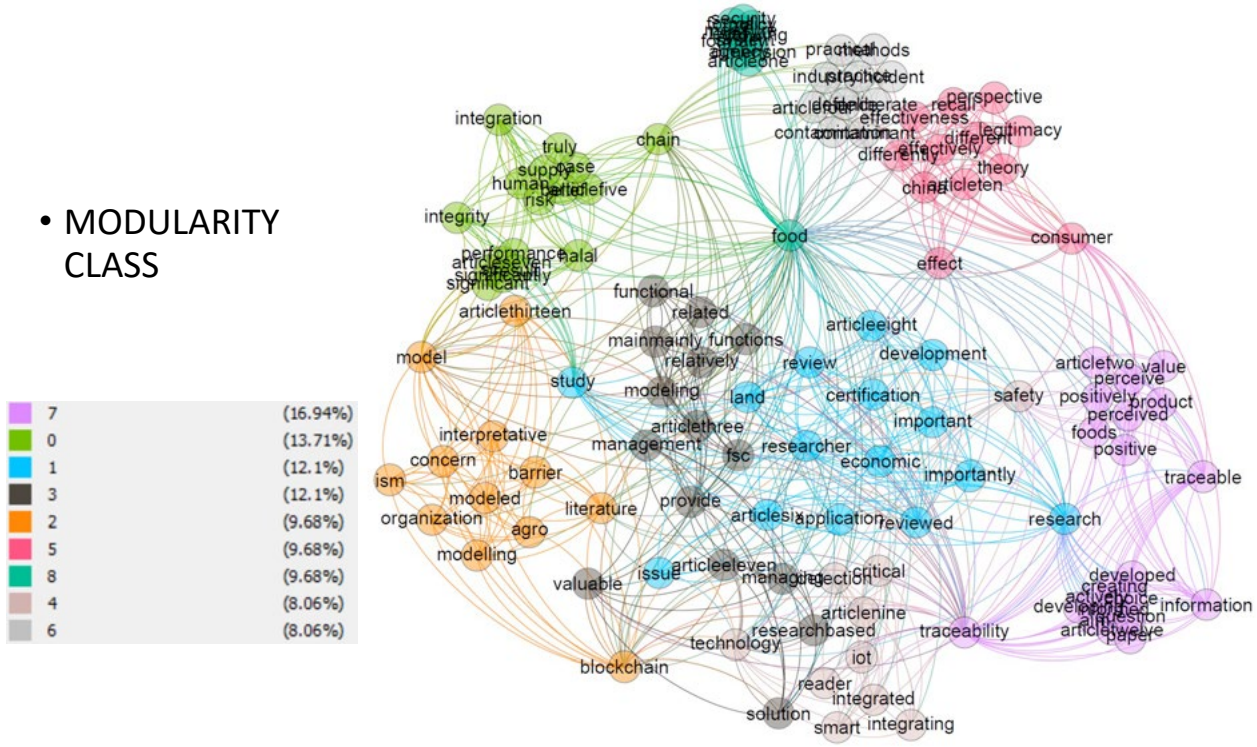
(a) Author keywords

- MODULARITY CLASS





(b) TF-IDF extracted keywords



(c) TextRank extracted keywords

Figure 6. Visualization of of sub-graph or cluster in semantic network constructed from Authors' keywords and extracted TF-IDF and TextRank based on modularity measure.

From Figure 6 (a), it can be seen that Authors' based graph clustered into seven groups or classes (0 to 6), TF-IDF based graph splits into eight classes (0 to 7), and TextRank based graph splits into 9 classes (0 to 8). The splits into clusters are summarized in Table 5.

Table 5. Summary of modularity check using modularity class function in Gephi.

Article ID	Class		
	Author	TF-IDF	TextRank
Article 1	3	2	8
Article 2	0	0	7
Article 3	4	4	3
Article 4	1	3	6
Article 5	4	3	0
Article 6	5	1	1
Article 7	4	7	0
Article 8	2	2	1
Article 9	0	1	4
Article 10	6	6	5
Article 11	2	0	3
Article 12	4	3	7
Article 13	4	5	2

Table 5 shows how Articles are merged into class which differ from one graph to another. In authors' graph, Articles 3, 7, 12, and 13 merge into cluster or class 4. In TF-IDF graph Articles 2 and 11 merge into class 0, Articles 1 and 8 merge into class 2, Articles 4, 5 and 12 merge into class 3. In TextRank

graph Articles 5 and 7 merge into class 0, Articles 5 and 8 merge into class 1, Articles 3 and 11 merge into class 3, Articles 2 and 12 merge into class 7.

Discussion

The networks visualization in Figures 4, 5 and 6 serve the purpose of this study. Bearing in mind that this work employs two methods (TF-IDF and TextRank) for exploring the lexical structure of the Concept of Blockchain Technology adoption in the Food Industry, using network visualizations of corpus-derived grammatical relations and keyword associations. The conceptual relations consist of keywords connected by category indicating the cluster of relations between words have been identified. It is insightful to summarize the keywords measured by pointwise mutual information of different types of keywords extraction methods. The procedure adopted in this study confirms the main contributions in the following paragraph.

Pursuant to visualization and calculation of parameters using Gephi, the 10 most important keywords according to Eigenvector centrality and Hub criteria are collected. While the structure of interconnection of one word to its adjacent is better visualize using graph as shown in Figure 4, 5 and 6, the selected most important keywords are visualized using table. They are tabulated in Table 6 for it is easier to visualize in textual compared to graph.

Table 6. Summary of most important keywords derived from Gephi using eigenvector centrality and hub functions.

Eigenvector centrality						Hub					
Author	Modularity class within network	tfidf	Modularity class within network	TextRank	Modularity class within network	Author	Modularity class within network	tfidf	Modularity class within network	TextRank	Modularity class within network
food	4	food	2	food	8	food	4	food	2	food	8
security	4	blockchain	5	traceability	7	security	2	blockchain	5	traceability	7
chain	4	traceability	0	consumer	5	chain	4	traceability	0	safety	4
supply	2	chain	3	research	1	supply	4	chain	3	research	1
traceability	2	supply	3	chain	0	sustainability	2	supply	3	consumer	5
sustainability	0	foodborne	3	model	2	traceability	0	foodborne	3	blockchain	2
agriculture	2	safety	1	safety	4	agriculture	2	safety	1	technology	4
blockchain	4	integrity	3	blockchain	2	blockchain	4	integrity	3	chain	0
safety	1	smart	4	technology	4	safety	1	smart	4	model	2
		security	2							researcher	1
		sustainability	2								

Table 6 can shows consistency among different techniques of keyword extraction with keywords proposed by the Authors. It can be seen also from Table 6 that the most important keywords do not necessarily represent all classes. Based on eigenvector centrality, four classes from Authors' keywords, six classes from TF-IDF, and seven classes from TextRank are important. On the basis of hub, four classes from Authors' keywords, six classes from TF-IDF, and seven classes from TextRank are important. There is agreement between both techniques however the words may different.

The fact that not all class are represented in most important keywords raises question whether the number of articles under study is insufficient. Or whether the content of Abstract and Conclusion do not cover all necessary semantic means intended to communicate by the Authors. However this

consideration constitutes the limitation of this study. It would be recommended to take higher number of sample articles in the dataset. However, it is not recommended to manual selection of important phrase or paragraph by the analyst from the article body of content as it will diminish the contribution of this study which ultimate objective is to minimize summarization time of corpus consisting large amount of articles mor precisely.

The ultimate activity in this study is to construct decision table. Table 7 is wishfully this.

Table 7. Vote of keywords forming the dimensions mined in this study.

Keyword	Number of Votes	Designated Dimension	Node position in the Network
blockchain	6	None	Global
chain	6	None	Global
food	6	None	Global
safety	6	Safety	Hub
traceability	6	Traceability	Hub
supply	4	None	Global
security	3	Security	Hub
sustainability	3	Sustainability	Hub
agriculture	2	None	Local/Specific
consumer	2	None	Local/Specific
foodborne	2	None	Local/Case
integrity	2	Integrity	Hub
model	2	None	Local/Specific
research	2	None	Local/Specific
smart	2	Smart	Hub
technology	2	None	Local/General
researcher	1	None	Local/Specific

Using majority voting, most important key words are selected to constitute the dimensions representing semantic concept depicted by the thirteen articles. The transformation into dimensions from most important keywords require researcher intervention. There is not available currently intelligent system that can replace human intervention in translating high level of semantic meaning.

Blockchain, food, supply, and chain are global nodes as investigated in respective semantic network, therefor can not be adopted as dimensions. The words connect overall semantic conception if otherwise removed will make the network breaks apart and so will the semantic concept.

Agriculture, consumer, model, research, and researcher are not promoted to dimension for they represent specific activity during the process and reported in the articles. Moreover, they represent concepts which are more generic applicable beyond blockchain-for-food. Technology is not selected either, as it represents more general concept under which umbrella is blockchain developed. It leaves safety, traceability, security, sustainability, integrity, and smart to be promoted dimension.

Conclusion

The method of using keywords extraction using TF-IDF and TextRank techniques and semantic analysis have been proven valuable candidates as a method to mine semantic meaning of corpus or documents.

The semantic mining is reinforced by decision making using majority voting of the keywords. As the keywords is extracted based on eigenvector centrality and hub within the semantic network, they represent certain semantic concept. However, in final voting process, human intervention is still required.

The three techniques of keywords generation i.e. by Author consent, by TF-IDF algorithm, and by TextRank have shown sufficient agreement, agreement which leads to ensure validity of semantic mining outcomes.

Limitation

Although the study employing procedure introduced above reveals convincing outcomes, the number of small samples used as dataset to the research constitutes limiting factor. Repetition of this study using more significant number of article samples is recommended to improve the procedure.

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A Comparison of Financing for Small, Medium-Sized(SMEs) and Large Family Firms: A Scientific Literature Review

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Abstract
The necessity for financing decisions is a critical event determining the success of small, medium-sized (SMEs) and large family firms since it will affect income performance. Accordingly, this study purposed to compare financing decisions based on debt and equity in SMEs and large family firms. Moreover, our works consist of the scientific review of 20references of empirical studies on SMEs and large family firms financing, which were published from 2011 to 2021. The results indicate discrepancies between SMEs and large family firms' financing policies. Small and medium-sized (SMEs) family firms are more likely to use internal financing and look for bank loans rather than external equity. On the other hand, large family firms are more willing to seek debt financing instead of issuing shares on the stock exchange. Finally, we expect the proposed work contributes to the literature on financing SMEs and large family firms.
Keywords: Family firms, Financing, SMEs, Large firms
JEL Classification: D1; G30; G32; M20; L2; L25

1. Introduction

Debt and equity-related financing decisions are essential mechanisms in supervisingmanagers when there is a separation of control and ownership (Croci et al., 2011). In addition, the financial decision-making process is a significant challenge for family firms in today's world (Kuzma, 2017). The choice in doing funding is influenced by the breakdown of ownership control in the family firms (Bouzgarrou, 2014).

In the process of financing companies with large family holdings, they tend to use debt toavoid losing control by issuing equity (Gottardo & Moisello, 2014). Oscar et al., (2018) stated that large and medium-sized family firms using debt as a source of financing can optimize the firm's performance and capacity, allowing the company to be more lucrative in the future. Another fact found that it is much easier to get sources of financing through debt in large family firms because financial problems and violations of information tend to be lower (Lardon et al., 2017). Furthermore, equity financing becomes the last option after the expiration of the source ofdebt (Koropp et al., 2014).

The proposed work of Serrasqueiro et al., (2016) shows that small family-owned firms tend to use internal rather than external financing; nevertheless, if internal financing is insufficient for the firm's activities, the manager will decide to switch to debt due to a lack of credit history and a limited commercial scope. Internal resources are typically the primary sourceof finance in small family-owned firms (Soler et al., 2021). Furthermore, it was found that familyfirms that rely on internal funding as a source of financing are in line with the lack of needs on additional loans and credit quality measurements will be much better (Murro & Peruzzi, 2019).

This literature analysis, in particular, demonstrates the difference in the fundamental financing of family firms between small, medium, and large-sized. The majority of existing research exposes only the financing features of small, medium firms (SMEs) and large family firms. We perform research reviews based on literature reviews from various studies and a comparison of financing characteristics between the two, which were published from 2011 to 2021. The research sample was divided into top countries, middle countries, and lower countries. It is determined by the number of countries observed in various investigations conducted across the continent.

According to our research, small and medium-sized family firms prefer to support themselves

through internal sources. Meanwhile, large family firms choose to support themselves through debt. Furthermore, our research aims to add essential knowledge and insights for practitioners and academics. Lastly, the study contributes to the literature related to financing decisions in family firms.

The rest of this paper is organized as follows. Section 2 presents existing literature related to family firms' financing, while section 3 introduces the research methodology, including research questions and the search process. Section 4 discusses the results and details of the research. Finally, section 5 summarizes this paper with conclusions.

2. Literature Review

This section focuses on the financing policy of family businesses and the distinctions between financing policy for SMEs and large family firms.

2.1 Family Firms Financing

The presence of a family as a controlling shareholder can affect the company in several aspects because controlling shareholders have the power to impose their opinions on directors, management, and minority shareholders (Setianto & Sari, 2017). The firm's financial decisions are one of the things that might be influenced by family ownership. Koropp et al., (2013) provided that one of the primary challenges for family firms is business succession. Many family firms fail at this task due to financial issues. Financial issues are essential for family businesses to manage since financing constraints have an impact on company investment, financial stability, and economic development. Succession financing may cause external financial demands because the owner-managers and their families usually invest most of their wealth into the business (Koropp et al., 2013). Family culture, family cohesion, age, and size of the family and firm are the main factors that affect the family firms' financial decision-making (Kuzma, 2017). Family company financing decisions depend not only on economic and financial factors but also on ownership and governance-related factors, i.e., the need to maintain family endowments in the company (Gottardo & Moisello, 2014) . Family norms toward external debt and external equity significantly influence the owner-manager's intention to use external debt and external equity financing (Koropp et al., 2014). The firms are more likely to use equity financing than debt financing when the family influence is strong (Bouzgarrou, 2014).

2.1.1 Small and Medium-Sized (SMEs) Family Firms

Small and Medium-Sized family firms have their financing policies. Small companies prioritize internal over external funding sources (Abdulsaleh & Worthington, 2013). The majority of small and medium-sized enterprises acquire financing from internal sources due to lower risk and small firms find it difficult to access external financing due to a lack of credit history. According to (Zhang et al., 2012), the possibility of SMEs family firms using internal finance is restricted by the owner's strong presence since general personal factors, succession- related personal factors, and firm characteristics influence the owner-manager's intentions. The studies state that SMEs owner-managers prefer to use debt financing than equities outside the company. Debt financing used on SMEs family firms is supported by the owner, bank, and other financial institutions. When analyzing the financial policies of small privately held family firms, it is critical to consider the existence of an outside CEO to make the best decision (Lardon et al., 2017).

2.1.2 Large Family Firms

Large firms significantly differ from small and medium-sized firms in their financial decisions (Abdulsaleh & Worthington, 2013). A considerable reluctance to equity financing exists within large family firms, and debt financing is the best option (Croci et al., 2011) because family firms avoid dispersion or losing control by issuing equity. External equity financing is viewed as a last option after sources of debt have been depleted (Koropp et al., 2014). The motive for obtaining private equity was that their family could not afford to invest more equity into the firm (Tappeiner et al., 2012). A larger firm has attracted large amounts of debt financing rather than a small firm. The higher the size

and profitability of the firms, the more likely they are to use debt financing, because banks' high trust in the large family firm can lead toeasier credit access in debt financing (Michiels & Molly, 2017).

2.2 Internal Financing

Financing is necessary for starting a business (Rahaman, 2011). One type of financing is internal financing sourced from company assets, owner's assets, and other sources. The effect of internally generated resources on firms' investment and external financial decisions has been stimulated by theoretical developments in information economics (Vogt, 1994). Imperfect stock markets are associated with the company sources of financing in a hierarchy, making investment and financial decisions incompatible (Goergen & Renneboog, 2001). For a long time, economists have believed that internal finance is the most crucial strategy for small businesses to raise capital (Bougheas, 2004). A financially limited company suffers a very high opportunity cost of investment, thus instead of reducing its usage of external finance, it may use internal funds for further capital spending (Almeida & Campello, 2010). If companies' investments are lower than desired levels due to capital market inefficiencies (i.e., if businesses are financially restricted), their spending should be allocated to internal funds (Almeida & Campello, 2010). Internal financing has a wealth of advantages over external financing, including the fact that there are no bankruptcy fees associated with it, even if it is in the form of debt (Chowdhry & Coval, 1998). Even though capital spending is substantially and positively related to the quantity of internally generated funds, companies with financing constraints appear to be underinvesting (Goergen & Renneboog, 2001).

3. Method

Our works, explicit in selecting studies, the systematic review method follow Michiels & Molly (2017). To answer the research question “What are the trends in SMEs and large family firms’ research concerning financing decisions in last ten years?”. First, we looked at references from the last ten years published using the Scopus index as the largest peer-reviewed research literature database. We looked up titles, summaries of family firms, and family firms combinations to find relevant articles. We searched all the references that discussed family firms to identify related studies. The search query was “Financing decisions, debt financing, equity financing, SMEs family firms, Large family firms, and family firms”. Next, to reduce the risk that we did not expect, such as data loss, we immediately moved files into the references list to facilitate us in the research process.

We build a sample consisting of several articles from 2011 to 2021, then we reviewed them thoroughly. We also emphasize focusing more on articles related to family firms. We found29 articles were identified and assessed, and a total of 20 articles were retained for review using the methods described and criteria. Demonstrate thoroughness in our case study research is by providing a detailed explanation of how case studies are identified and the data collected last analyzed (Gibbert & Ruigrok, 2010). We used a variety of articles, with 41,871 samples SMEs family firms identified based in Asia; 34,217 samples SMEs family firms based in Africa; 26,868 samples SMEs family firms based in the US; 815 samples SMEs family firms based in Australia;42,285 firms based in Europe, and 39,857 firms that unidentified country. Meanwhile, the samples of large family firms based in Europe with 14,160 samples and 310 samples based in Asia (Figure 2). A total of 185,913 samples of SMEs family firms and 14,470 samples of large family firms were collected.

Furthermore, we select samples from each of the five countries, including 39,900 samplesused as top SMEs family firms; 3,271 samples used as medium country SMEs family firms, and 483 samples used as low country SMEs family firms. Meanwhile, in the sample of large family firms; 13,380 samples are utilized for the country's top sample; 949 samples for medium country samples; and 141 samples for low country samples large family firms (Tables 2 and 3).

4. Result And Discussions

According to the procedures described in Section 3, 20 papers were obtained. The search results are listed in Table 1, which will be used to analyze financing in SMEs and large family firms.

Figure 1 shows as many as 20 papers, as many as 12 papers included in large family firms,6 papers included in SMEs family firms, and 2 papers combined from SMEs and large family firms. The trends of financing decisions on SMEs and large family firms are presented in Figure
1. As a result, whereas debt and equity financing are commonly used in large family firms, internal financing, followed by debt financing, is used in SMEs family firms, on the other hand. If a firm requires financing for the firm's sustainability and to expand its performance, then both SMEs and large family firms need financing. In SMEs, the financing used tends to use internal financing, then use debt financing from bank loans rather than using external equity. In large family firms, it can be seen that the financing used tends to use debt financing and use equity financing, rather than issuing shares on the stock exchange.

Small and Medium-Sized (SMEs) family firms tend to use internal financing for their sources of growth. But their last option is also supported by debt financing for their company's growth (Soler et al., 2020; Zhang et al., 2012). López & Diéguez (2020), Gottardo & Moisello (2019), and Chua et al., (2011) point that large family firms tend to use debt financing because the higher the involvement of the family on the board of directors will be higher the level of debt, access to credit provided by creditors are more accessible, the interest given is lower so thatthe company can develop the company well. Figure 2 shows the sample of SMEs family firms consisting of 6 continents, the Continent of Africa numbered 34,217, the Americas numbered 26,868, the Asian continent amounted to 41,871, the continent of Australia numbered 815, the continent of Europe amounted to 42,285, the unidentified continent amounted to 39,857. Figure3 shows the sample of large family firms consisting of 2 continents, namely the Asian continent numbering 310, the Continent of Europe amounted to 14,160.

In this work, we also classified the sample of SMEs and large family firms into three categories based on the amount of the sample. Furthermore, we pick the top five samples with the highest amount, the middle five samples with a medium amount, and the bottom five sampleswith the lowest amount. Table 2 shows that in the sample top country, as many as 39,900 SMEs family firms utilized internal financing. In the middle country sample of 3,271 SMEs family firms showed that the financing used internal financing. The low country sample of 483 for SMEs family firms showed that the financing used internal financing. This is consistent with a prior study, which found that internal resources are typically the primary source of choice in small and medium-sized firms (Soler et al., 2020). Furthermore, most small and medium-sized firms choose internal financing related to lower risk. In contrast, small firms find it difficult to access external financing due to a lack of credit history (Zhang et al., 2012).

Table 3 describes, in the sample top country, as many as 13,380 for large family firms showed that the financing used tends to use internal and debt, but some use equity. The middle country sample of 949 for large family firms showed that the financing used debt. The low country sample of 357 for large family firms showed that the financing used debt. Large family firms prefer to use debt financing because a considerable aversion to equity financing exists in large family businesses, and debt financing is the best option Croci et al., (2011) because family companies avoid dispersion or lose control by issuing equity. Moreover, external equity financing is seen as a last resort after the source of the debt has been depleted (Koropp et al., 2014).

The Effect of Bank's Specific Variables on Non-Performing Loan (NPL) For Period 2011-2020 (Case Study PT Bank Tabungan Negara Tbk)

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Abstract

This study examines the determinants factors of non-performing loan (NPL) in PT Bank Tabungan Negara Tbk (BTN). Since the global financial crisis began, NPL of the bank into the spotlight due to its dangerous impact. NPL is a benchmark for assessing the quality and performance of bank assets. Higher NPL shows a worse quality of bank credit, therefore the risk of the bank getting bigger and the bank should increase their equity as a buffer to avoid the risk. Using bank-specific internal financial information in 2011-2020, the data will be processed by using Ordinary Least Square through EViews Software to examine the effect of those variables to NPL. This study is choosing four independent variables from bank's specific variables namely Net interest margin (NIM), loan to deposit ratio (LDR) , credit growth (CG) and capital adequacy ratio (CAR). The result shows that four BTN's specific variables have positive effect its non-performing loans that are NIM, LDR, CG and CAR

Keywords: NPL, Risk, Bank, Ordinary Least Square.

JEL Classification: [G2]

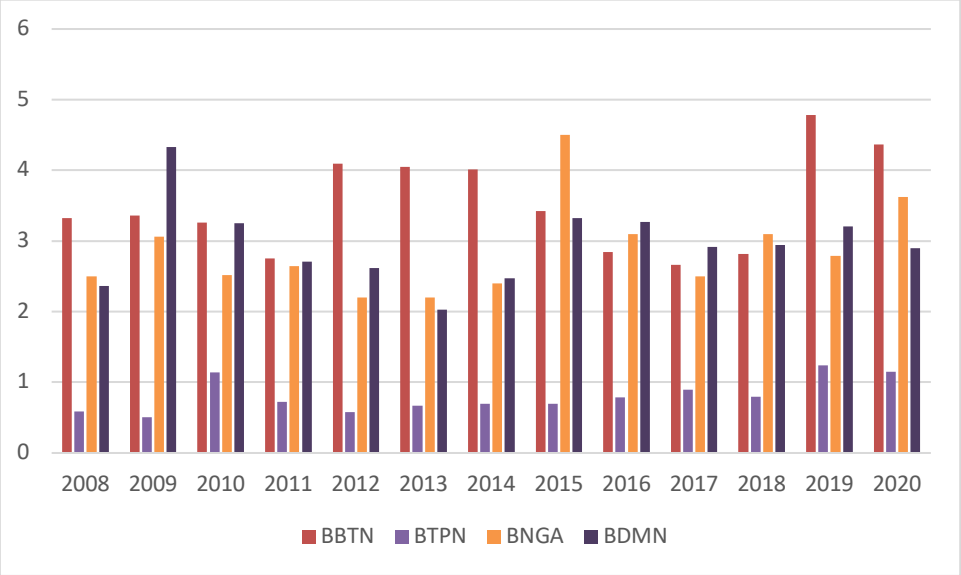
Introduction

This study examines the factors of bank specific variables that effect in BBTN's non-performing loan (NPL). Indonesia had failed in 1998, according to the central bank report in 1998, the amount of non-performing loans in national banks reached Rp 10.2 trillion as of April 1997, up by 7.7% compared to the end of 1996. The principle of prudential banking did not work. In terms of health, banks are very fragile, as a result, the IDR rate dropped, the banking forex debt swelled. At the same time, debtors exposed to the crisis have difficulty paying their foreign currency liabilities to banks. Thus, the bank has a huge liquidity problem (mismatch), and it is difficult to pay off foreign currency debts. After the crisis, the regulator began to regain control of the banking industry, and have regulatory actions to have healthy and competitive industry.

Credit risk is inherent in the banking business: lending always carries a risk that the loan will not be repaid. For the same reason, credit risk is the focus of banking supervisory work around the world, where banks pay particular attention to non-performing loans (NPLs). The level of non-performing loans is important to the economy because these loans strain the profitability of banks and absorb valuable resources, limiting the ability of banks to make new loans. Problems in the banking sector can also quickly spread to other parts of the economy, undermining job and growth prospects. The challenge for financial intermediaries is to ensure the resolution of non-performing loans.

Figure 1.

Non-performing loan of 4 Private Banks In Indonesia

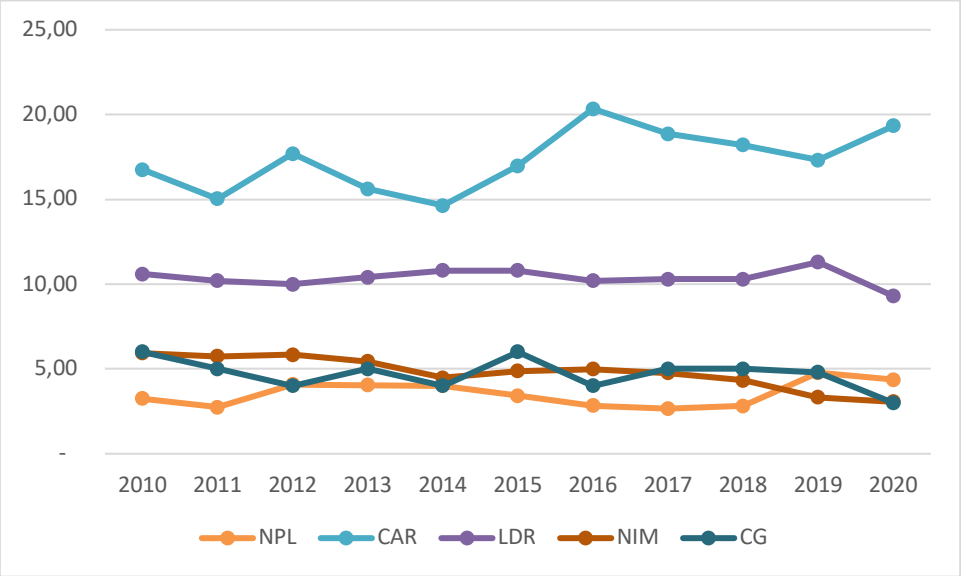


Source: Data Processing

Figure 1. represent non-performing loan banks from 2008-2020. In 2008, BBTN became the highest rate of NPL followed by BNGA. In 2009, BDMN became the highest rate of NPL but BDMN can reduce it in 2010. Different from the other banks, the graph shows that BBTN's NPL tends to be high and it has not change in 2012 until 2014. In 2015 BNGA has been the highest NPL level but has been able to reduce it in 2016. In 2019 and 2020 BTN's NPL has been the highest NPL level compared to 3 other banks. From 4 private banks in figure 1, with the same size of asset and same group activity criteria BTN becoming the highest level of NPL.

Figure 2.

Business Financial Data of BBTN



Source: Data Processing

Figure 2 is the internal financial data of BBTN for the period 2011-2020. The increase in NPL will force banks to strengthen their capital structure, therefore banks will increase the portion of the allowance for Earning Assets Losses. Consequently, when banks seek to strengthen their capital structure, this will automatically reduce the ability of banks to expand credit. In figure 1.2 there are four independent variables which are CAR, NIM, LDR, and CG from 2011-2020.

The research question is in this study, what caused the BTN has high NPL. What determinant factors of NPL plays an important key role in bank business plan and strategic decision to achieve high performance.

Literature Review

The Basel Committee on Banking Supervision has introduced the definition of non-performing loan, a criterion for loans and debt security overdue for a period of more than 90 days. European banking supervision also confirm that bank must classify a loan as non-performing loan when it past due for 90 days, or if the bank sure that the borrower is unlikely to repay the loan. Non-performing loan is an important issue that banks must tide over.

The Indonesia's financial services authority (OJK) has release regulation number 18 /pojk.03/2016 about risk management for commercial banks. The regulation states, among other things credit risk is a risk that is cause by failure of other parties to fulfill their obligation to the bank, it includes risk that cause by failure of a debtor, risk of counterparty credit, risk of credit concentration, and risk of settlement. The risk of counterparty credit is come out from failure of other parties to fulfill their obligation and it come out from a type of activities that has a certain characteristic, such as activities that are affected by the movement of fair value or market value. The risk of credit concentration is come out from the focus of fund provision to 1 (one) party or one group of party, industry, sector, and/or a certain geographic area that have the potential to cause substantial losses that can threaten the continuity of Bank's activities. The risk of Settlement is come out from failure to submit cash and/or financial instruments on settlement date that has been agreed from a sales

Non-performing loan (NPL) is the amount of borrowed money where the debtor has not made his scheduled payments for at least 90 days; it is as an indicator to measure and assess the quality and the performance of bank assets and also as an indicator to measure and assess the possibility of credit risk can occur. A non-performing ratio is measuring the risk of a bank which related to credit risk, index of risk and also some defaulted risk. High of NPL rate indicates worse quality of the bank credit, hence more significant credit risk. Bank intermediary function will distract when NPL increases, as a result, bank might have difficulty in providing new loan and at the same time bank has to increase core capital or converting risky liquid assets to less risky liquid assets in order to maintain liquidity (Anggono,2017).

Non performing-loans basically occur due to many factors, whether it is coming from the internal banks, the external conditions, or because of the borrower's character (Dendawijaya , 2003). However, the bank's management typically uses the financial ratios, as they can provide lots of information to be explored. Manab et al. (2015) in his research of credit risk determinants in Malaysia, argued the same that "One of the mostly used and generally accepted methods in managing credit risk is the default prediction model using financial ratios". In respond to this, there will be five financial ratios used in this research, which include bank size, capital adequacy, loan to deposit, net interest margin, and operating efficiency as the determinants of non-performing loans. In many literatures, they also known as the bank-specific variables

Factors Affecting Credit Risk

According to Alvaribi and Fanani (2016), Anggraeni (2016), and Yulita (2014), there are several factors that affect credit risk are:

a) Credit Growth
Credit growth is an increase in the number of loans or loans demanded by debtors. The number of debtors who fail to pay will increase credit risk to the bank.

b) Bank Size
The size of the bank will reflect the size of the bank when viewed from the total assets it has. If a bank has large assets, then these assets can be managed to mitigate the bank's credit risk that may occur.

c) Level of Liquidity
The level of liquidity is measured by Loan to Deposit Ratio (LDR). According to Dendawijaya (2009) in Retnosari (2016) states that LDR is a comparison between the total amount of loan provided by the bank and the funds received by the bank. If more debts are issued, the LDR will increase so that the possibility of credit risk can also increase

d) Capital Adequacy Ratio
The Capital Adequacy Ratio (CAR) is known as an investment to risk-weighted assets, it is the ratio of bank equity to its risk. This CAR is useful to ensure that the bank can absorb a reasonable amount of loss and meet the required capital requirement. Minimum capital adequacy ratio was introduced in 1988, and it is known as the Basel 1 capital accords. Furthermore, it developed base on the Basel II (2006) and Basel III (2011) Accords. In general, the capital consists of a mixture of debt and equity, but in Basel III more emphasis on investment because it provides a superior buffer against losses

e) Net Interest Margin
NIM (Net Interest Margin) is a measure of the difference between the interest income generated by the bank and the interest rate paid to creditors. When a bank's NIM decreases, the bank will change its credit policy, so this will increase the credit risk that may occur to the bank.

f) BI rate
BI rate as a benchmark for interest rate determined by central bank and then it used as a reference for bank loan interest rates. BI rate useful for all financial contracts such as mortgages, bank overdrafts, and other more complex banking transactions.

Gizaw et al. (2015) investigated the impact of credit risk on profitability performance of commercial banks in Ethiopia for 12 years. This study shows that the credit risk measures: non-performing loan, loan loss provisions, and capital adequacy have a significant impact on the profitability

Anugerah (2015) found a high amount of NIM will indicate that the bank is more effective in managing their earning assets in the form of credit, which in turn wil reduce the possibility of bank becoming default. In the contrary, several studies are giving such a different result, Rosyada (2015) in his research explained that, when the net interest income of bank increased, it will affect to the bank's profit as well as the number of credits. They will be more interested to expand the credits and as the consequences, the possibility of bad debts will be increased as well.

Methods

This study examines 4 specific internal variables from 2011 through 2020 on Non-Performing Loans of BBTN. Business financial variables such as interest margin (NIM), loan to deposit ratio (LDR), credit growth (CG) and Capital Adequacy Ratio (CAR) will be used as explanatory variables to estimate how far these variables affect the non-performing loan. Ordinary least square analysis will be conducted to determine how these variables affect the NPL. The research is using regression analysis technique time series by using Ordinary Least Square through EViews Software to examine the effect of those variables to NPL. The equation model for OLS regression is:

$$NPL_{it} = \beta 0 + \beta 1\, NIM_{it} + \beta 2 LDR_{it} + \beta 3 CG_{it} + \beta 4 CAR_{it} + \varepsilon$$

Non-performing loan (NPL) is the amount of borrowed money where the debtor has not made his scheduled payments for at least 90 days; it is as an indicator to measure and assess the quality and the performance of bank assets. Where the NPL is calculate by following formula: non-performing loan (NPL) is the amount of borrowed money where the debtor has not made his scheduled payments for at least 90 days; it is as an indicator to measure and assess the quality and the performance of bank assets. Where the NPL is calculate by following formula: $NPL = \frac{Non\ performing\ loan}{total\ loan}\ X\ 100\%$

Net Interest Margin (NIM)

NIM is usually used to measure the ability of banking management to generate net interest income. According to Rime (2001), the bank NIM is negatively influenced of non-performing loan, because of the high-profit indicate that bank business activity running in goodly manner. The following formula to count the net interest margin.

$$\text{NIM} = \frac{\text{Net interest income}}{\text{Average earning Assets}}$$

Loan To Deposit Ratio (LDR)

Loan to deposit ratio (LDR) assesses the level of bank liquidity by dividing the total credit of a bank with total deposits. The bank may not have enough liquidity to cover all unexpected fund requirements If the ratio is too high. The bank may not generate as many earnings as possible if the rate is too low. LDR formula is:

$$LDR = \frac{Credit}{Third\ party\ fund}$$

Credit Growth (CG)

Credit is the provision of money under a loan agreement between the bank and another party, and it requires the borrower to repay the debt after a certain period and to provide interest in return. Credit growth ratio is the percentage increase or decline in the credit provided by the bank in some period. Credit growth ratio is the percentage increase or decline in the credit provided by the bank in some period. CG is calculated by the formula:

$$CG = \frac{Current\ year\ total\ loans - last\ year\ total\ loans}{last\ year\ total\ loans}\ X\ 100\%$$

Capital Adequacy Ratio (CAR) is defined as :

The capital ratio is a capital adequacy ratio that shows the ability of banks to provide funds that are used to overcome the possible risk of loss (Macroeconomic Dashboard FEB UGM, 2018), the formula for CAR is:

$$\text{Capital Adequacy Ratio (CAR)} = \frac{Tier\ 1\ capital + Tier\ 2\ capital}{risk-weighted\ assets}\ x\ 100\%$$

Tier 1 consists of primarily of shareholder's equity and other reserves, where for Tier 2 consist of subordinate debt and general loan loss provision. Bank Indonesia Regulation No.15/12/PBI/2013 mentioned that Risk-weighted assets used in the calculation of minimum capital consisting of Credit risk, operational risk, and market risk

Results

Multicollinearity test

Pair wise correlation table in EViews shows that there are no variables with correlation coefficient which is more than 0.9. from the table 1. can be known that no multicollinearity between variables. The result 1.000000 means that the correlation is between the same variables

Table 1.
Multicollinearity Test

	NPL	NIM	LDR	CG	CAR
NPL	1.000000	-0.133727	0.003176	0.313558	0.841977
NIM	-0.133727	1.000000	-0.079072	0.475634	-0.395809
LDR	0.003176	-0.079072	1.000000	-0.049926	-0.164043
CG	0.313558	0.475634	-0.049926	1.000000	0.208628
CAR	0.841977	-0.395809	-0.164043	0.208628	1.000000

Autocorrelation Test
Autocorrelation is the correlation among members in series of observation in specific horizon or space. It is good for regression model not to have autocorrelation in the model (Gujarati,2004). Breusch-Godfrey Serial Correlation LM Test will conducted find the result
Autocorrelation is the correlation among members in series of observation in specific horizon or space. It is good for regression model not to have autocorrelation in the model (Gujarati,2004). Breusch-Godfrey Serial Correlation LM Test will conducted find the result.

Table 2.

The Autocorrelation test result

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	2.301011	Prob. F(2,33)	0.1160
Obs*R-squared	4.895504	Prob. Chi-Square(2)	0.0865

Autocorrelation can be detected by using Obs*R-squared value. The Obs*R-squared value is resulting in 4.895504 which exceeds the significant level of 0.05. The value of Prob. Chi-Square (2) 0,0865 is bigger than 0,05, it means that no autocorrelation case in this regression model.

Heteroskedastic

The interference will make residual variance value get different that it will lead to heteroskedasticity problem (Gujarati, 2004). In this study, White General Heteroskedasticity test will use to evaluate heteroskedasticity problem. In EViews, the heteroskedasticity problem will be assess through Obs*R-squared value with hypothesis of:
H0: Homoskedasticity
H1: Heteroskedasticity
If the value of Obs*R-squared below significant level, then heteroskedasticity exists. In reverse, if the value of Obs*R-squared above the significant level, then homoscedasticity exists

Table 3.
The Heteroskedastic Test Result

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.847721	Prob. F(4,35)	0.1417
Obs*R-squared	6.974032	Prob. Chi-Square(4)	0.1373
Scaled explained SS	3.028443	Prob. Chi-Square(4)	0.5531

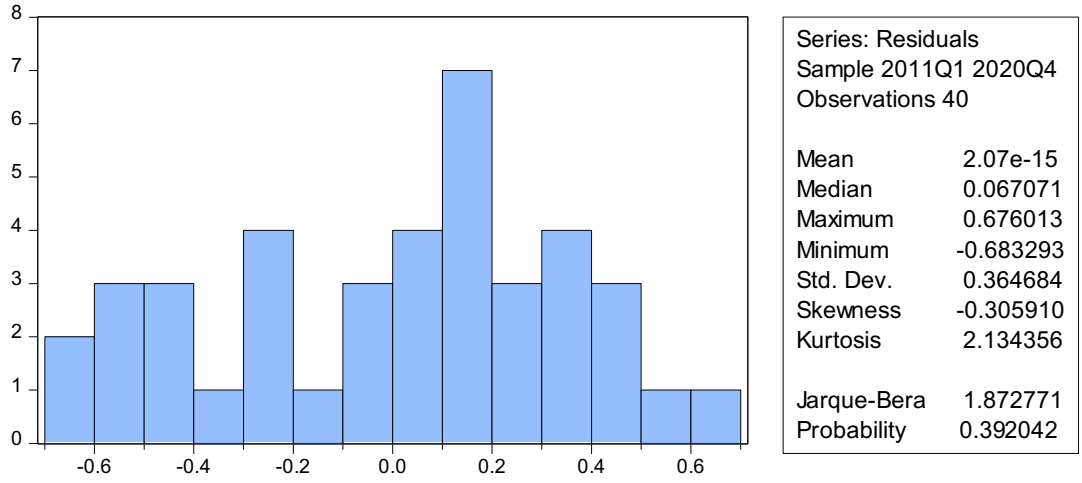
Base on Table 3. The White Test result indicates that the Obs*R-squared value is 0,974 which is more than significant level (0.05). The Prob. Chi-Square (4) is 0,1373 where this value is bigger that 0,05 it means that there is no heteroscedasticity in the regression model.

Normality Test

To determine whether the residual value is distributed normally or not, this study will conduct normality test through Jarque-Bera (JB) test in Eviews. The difference between the expected value with the value of the actual data is called residual value. The result of JB value will be compared with the chi square value. Normality Requirements:

If the probability value < 0.05, then the data is not normally distributed.
If the probability value is > 0.05, then the data is normally distributed

Figure 4.
The result of Normality Test



From the table 4. Can be known that Probability value is 0,392042 > 0.05. The value means that the data is normally distributed. After meet the requirement test to conduct regression analysis, the authors will conduct multiple regression analysis using OLS as follows:

Ordinary Least Square Analysis Using Four Independent Variables

To see the effect of NIM, LDR, CG, CAR Against Non-Performing Loan, the regression equation as follows:

$NPL_{it} = \beta 0 + \beta 1\ NIM_{it} + \beta 2 LDR_{it} + \beta 3 CG_{it} + \beta 4 CAR_{it} + \varepsilon$

Where:

NPL	= Dependent Variable
β0	= Constant Term
β1	= Coefficient for non-performing loan
NIM	= Net Interest Margin
β2	= Coefficient for credit growth
LDR	= Loan to Deposit Ratio
β3	= Coefficient for loan to deposit ratio

CG = Credit Growth
β4 = Coefficient for net interest margin
CAR = Non-Performing Loan
ε = Error Component

Based on the equations of Ordinary Least Square (OLS) regression model that explains the effect of all independent variables toward non-performing loan on BBTN, Results for regression analysis are presented in the following table:

Table 4.

OLS Analysis Result

Dependent Variable: NPL
Method: Least Squares
Date: 11/14/21 Time: 18:40
Sample: 2011Q1 2020Q4
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NIM	0.178391	0.081084	2.200082	0.0345
LDR	0.024593	0.011467	2.144667	0.0390
CG	10.17415	4.549350	2.236395	0.0318
CAR	0.384226	0.046212	8.314390	0.0000
C	-8.057219	1.733329	-4.648408	0.0000

R-squared	0.814996	Mean dependent var	2.400500
Adjusted R-squared	0.793852	S.D. dependent var	0.793344
S.E. of regression	0.360206	Akaike info criterion	0.912187
Sum squared resid	4.541192	Schwarz criterion	1.123297
Log likelihood	-13.24374	Hannan-Quinn criter.	0.988518
F-statistic	38.54616	Durbin-Watson stat	1.282859
Prob(F-statistic)	0.000000		

Based on table 4.,from the equation formula that explains the effect of all independent variables toward NPL, namely:

NPL it = -8.057219 + 0.178391 NIM + 0.024593 LDR + 10.17415 CG + 0.384226 CAR

The regression coefficient value on the independent variables describes if the estimated independent variables rise by one unit and the value of other independent variables are estimated to be constant or equal to zero, then the value of the dependent variable is expected to rise or may fall in accordance with the sign of regression coefficient of independent variables.
From the regression equation of ordinary least square data above the obtained value of constants equal to -8.057219. it means if the NPL is not affected by the four independent variables that are NIM, LDR, CG, and CAR, then the average percentage of NPL will be fall by 8,05%
The regression coefficient for the independent variable NIM is positive, indicating a direct relationship between NIM and NPL. The regression coefficient of NIM variable equal to 0.178391 means that for each increase of NIM for one percent will increase NPL equal to 0,178391%

The regression coefficient for independent variable LDR is positive, indicating a direct relationship between LDR and NPL. The regression coefficient of variable LDR of 0.024593 means for each increase of LDR of one percent will increase NPL of 0.024593 %
The regression coefficient for independent variable CG is positive, indicating a direct relationship between CG and NPL. The regression coefficient of variable CG is 10.17415 means for each increase of CG of one percent will increase NPL of 10%
The regression coefficient for independent variable CAR is positive, indicating a direct relationship between CAR and NPL. The regression coefficient of variable CAR is 0.384226 means for each increase of CAR of one percent will increase NPL of 0,384226%

F-Test

F test or simultaneous test is used to see whether it is significant or not the influence of independent variables to dependent variable.

Table 5.

F-Test

R-squared	0.814996	Mean dependent var	2.400500
Adjusted R-squared	0.793852	S.D. dependent var	0.793344
S.E. of regression	0.360206	Akaike info criterion	0.912187
Sum squared resid	4.541192	Schwarz criterion	1.123297
Log likelihood	-13.24374	Hannan-Quinn criter.	0.988518
F-statistic	38.54616	Durbin-Watson stat	1.282859
Prob(F-statistic)	0.000000		

From the table 5. Prob F-stat is obtained. F count of 0,000. Because Prob. F arithmetic (0,000) <0.05. Thus it can be concluded that there are simultaneously significant influence of NIM,LDR,CG, and CAR to NPL.

T –Test

To find out whether significant or not the influence of independent variables partially to the dependent variable then used t test. The t test results are presented in the following table:

Table 6.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NIM	0.178391	0.081084	2.200082	0.0345
LDR	0.024593	0.011467	2.144667	0.0390
CG	10.17415	4.549350	2.236395	0.0318
CAR	0.384226	0.046212	8.314390	0.0000
C	-8.057219	1.733329	-4.648408	0.0000

Given that the t Table with value of 1,684

Based on table 6. the results that partially, NIM has a significant effect on NPL, it can be seen from the value of t-statistic 2,2000; this value is greater than the value of t table 1.684 with the direction of a positive relationship. Also in line with the probability value that is below the tolerable error of 5% (0.0345 <0,05) 95% confidence level, It means that the higher NIM of a Bank will cause the higher of NPL

LDR has significant effect on NPL; This can be seen from the t-statistic value of 2,144 this value is bigger than the value of t table 1.684 with the direction of a positive relationship. Also, in line with probability values that is below the tolerable error of 5% (0.0390 > 0.05) 95% confidence level. It means that the higher LDR of a Bank will cause the higher of NPL

CG has a significant effect on NPL. It can be seen from the t-statistic value of 2.236; this value is greater than the value of t table 1.684 with the direction of a positive relationship. The probability value that is above the tolerable error of 5% (0,03 <0.05) confidence level. These values explain that if CG increase will cause the increasing of NPL

CAR has a significant effect on NPL. It can be seen from the t-statistic value of 11.87536; this value is greater than the value of t table 1.684 with the direction of a positive relationship. Also in line with the probability value that is below the tolerable error of 5% (0,000 <0.05) 95% confidence level, meaning that the higher CAR of a bank then the NPL of the bank will be higher.

Determination Coefficient Analysis (R Square)

Coefficient of determination used to see the magnitude of the effect of independent variables together on the NPL. If the simultaneous test is used to test the hypothesis as a whole, the coefficient of determination is used to calculate the magnitude of the influence of the four independent variables, namely the NIM, LDR, CG, and CAR. The magnitude of this influence ranges from 0 to 1 or 0% to 100% intervals. Table 4. shows the results of the calculation coefficient of determination. Based on the above results, we have obtained Adjusted R-squared value of 0.82. This indicates that the contribution of NIM, LDR, CG, and CAR, to Non-Performing Loan of BBTN is 82 % while the remaining 18% is the contribution of other variables in addition to the independent variables studied.

Discussion

From the estimation result can be known that NIM, LDR, CG, and CAR positive significantly affect the NPL. Below will be explained the relationship between NPL with each variable.

The estimation results show that the NIM positively and significantly affect the bank's NPL. The result indicates the bank have to increase their loan to increase the NIM. The increasing of loan indicates that not all of the loans can make a profit but also can increase the NPL.

The estimation results show that the LDR positively and significantly affect the bank's NPL. If more debts are issued the ratio between loan to debt will increase so that the possibility of credit risk can also increase through NPL.

Credit growth ratio is the percentage increase or decline in the credit provided by the bank in some period. Non-performing loan (NPL) is the amount of borrowed money where the debtor has not made his scheduled payments for at least 90 days; it is as an indicator to measure and assess the quality and the performance of bank assets. Related From the definition, the result indicates that increasing of loan or credit that issued by bank as a lender and it is not followed by proper procedures for analysing credit with the precautionary principle then the NPL increase.

The estimation results show that the CAR positively and significantly affect the bank's NPL. As we know that CAR as a buffer for bank to anticipate the risk. The result indicate that bank increase their CAR due to the increase of the risk.

Conclusion

Non-performing loan (NPL) of BBTN is influenced by net interest margin, loan to deposit ratio, credit growth and capital adequacy ratio of the BBTN. By using the internal business data of the bank, most of the main problems of banks are either explicitly or implicitly caused by weaknesses in credit risk management.

Limitation

1. This research focus on NPL of BBTN .
2. The data research obtained from quarterly reports that published by Indonesia financial services authority and also publised by BBTN from 2011-2020
3. The scope of the independent variable is limited which is from internal factors

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"THE ROLE OF FORENSIC ACCOUNTANTS IN FRAUD DISCLOSURE IN INDONESIA"

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Abstract
Forensic accounting refers to a super specialization for an accountant. An auditor is an accountant who specializes in the audit of financial statements. Forensic accountants are auditors who are more specifically specialized in fraud. Disciplines that must be mastered to be a forensic accountant include accounting, auditing, and law. The development of forensic accountant profession in Indonesia is quite advanced. However, when it is compared to several other countries, Indonesia is still left behind. Although Indonesia is not the most corrupt country in the world, corruption is a very serious problem in the country. The rise of corruption cases and embezzlement of funds carried out by various parties for their personal interests can harm the company and the government. The fraud which frequently happens in state-owned institutions is the reason for the emergence of forensic accounting profession in Indonesia. Fraud itself is one of the problems that continues to occur until now. There is no institution or company institution that can really be free from fraud possibility. Fraud perpetrators are also present at all levels, both in the upper and lower classes of employees. Eradication of fraud in corruption is an opportunity as well as a challenge for them. This research is designed to employ qualitative research method with the Association of Certified Fraud Examiners as data source. The data is collected using documentation technique, which means the data comes from the books that have discussed the duties and responsibilities of a forensic accountant. Institutions such as BPK, BPKP, KPK, PPATK, KAP, financial intelligence institutions and other law enforcement agencies have begun to employ forensic accountant profession. Forensic accounting is a development of accounting disciplines that is still relatively new. The current availability of the profession is less than 10%, and has very good prospects in the future. This is what motivates the author to introduce and explain to readers, especially accounting graduates, about the expansion of the new profession from the development of accounting science.
Keywords: Forensic Accountant, Fraud, Institution.

Introduction

The crime of fraud has occurred in all aspects of life in this country. This can be seen from the massive cases of corruption and embezzlement of funds by various parties for their personal interests, which can harm their company and the government. Fraud itself is one of the problems that continue to occur until now. No institution or company institution can really be free from the possibility of fraud. Its perpetrators are also present at all levels, both in the upper and lower classes of employees. Therefore, the entire community needs to improve the personal data security system to reduce fraud possibility.

The discipline of forensic accounting is evolving with increasing crime rates, corruption, poorly functioning policymakers, and weak security systems. Forensic accountants need expertise and knowledge in addition to accounting knowledge to carry out their duties (Prabowo, 2013). Disciplines that must be mastered to be a forensic account include accounting, auditing and law.

Forensic Accounting Diagram

Forensic accountants have been known in the accounting profession a few years ago primarily since a major financial scandal in the world (such as Enron, WorldCom, Global Crossing, etc.) occurred during 2000-2002 resulting in perception change/view toward accounting profession. Forensic accountants began to be used in Indonesia after the financial crisis in 1997. Up to now, the forensic accounting approach is widely used by the Supreme Audit Agency, the Corruption Eradication Commission, the Center for Financial Transaction Reports and Analysis, the Financial and Development Supervisory Agency, the World Bank, and other offices of Public Accounting in Indonesia. The efforts and methods taken are strategies that the government has implemented to create anti-fraud controls to reduce fraud potential. But, in fact, no corporate entity is immune to this threat. The endless frauds create an increasing demand for services in fraud investigations. Therefore, forensic accountants are indispensable.

The development of forensic accountants in Indonesia is quite advanced. But, when compared to several other countries, Indonesia is still left-behind. On one side, Australia is currently preparing Forensic Accounting Standards, while Canada and the United States already have standard standards. On another side, Indonesia does not yet have adequate standards. So far, not many corruption cases have been revealed due to the ability of forensic accountants. However, forensic accounting is a development of accounting disciplines that are still relatively new in Indonesia and have excellent prospects in solving corruption crimes in Indonesia.

The importance of forensic accounting in combating fraud such as money laundering and corruption has been seen in several forensic accounting studies. The application of the mindset and expertise of forensic accounting is very important to prevent, detect and respond to fraud in the performance of the task of assessing the risk of fraud in the public sector. The demand for forensic accounting services has increased over the last few years. Thus, it is expected that firms and law firms will develop internally forensic accounting capabilities rather than relying exclusively on third parties (Henning and Misuraca ,2013).

The formulation of the problem is in line with the objectives, namely "What is the role of forensic accountants in disclosing fraud in Indonesia?". This research aims to inform that there is a new professional development for accounting graduates.

Literature Review

Fraud

Fraud is an intended action that can cause harm to such party without being aware of it and provide benefits for the perpetrators. Fraud is given different names in everyday terms, such as theft, extortion, embezzlement, forgery, and others. It generally occurs because of pressure to commit fraud or encouragement to take advantage of current opportunities, and there is a rationalization (generally accepted) for these actions. There are two kinds of misstatements, namely errors and fraud. Fraud is translated as cheating in accordance with Statement of Auditing Standards (PSA) No. 70.

Fraud (cheating) is a general understanding that includes a variety of ways that can be used by human ingenuity, which is used to take advantage of others through improper actions. To be clear, the definition of fraud according to the Association of Certified Fraud Examiner (ACFE) is: "Fraud is an intentional untruth or dishonest scheme used to take deliberate and unfair advantage of another person or group of people in included any mean, such cheats another."

With the understanding above, it can be concluded that fraud is concerned with the benefits that someone gets by presenting something that is not following the actual situation. It includes elements of surprise/unexpectedness, deceit, cunning, and dishonesty that harm others.

Fraud Diamond

Fraud diamond is a term used to describe four conditions that cause someone to commit fraud in a company. The fraud diamond theory is quite popular to reveal the reasons for fraud in business. Fraud diamond analysis has four stages to detect the cause of fraud in a worker. These stages are incentive, opportunity, capability and rationalization. The four stages of the fraud diamond are interrelated. An explanation of the stages of the fraud diamond is as follows:

1. Incentive : Reasons that can cause an employee to steal from a company, such as personal debts, greed, drug abuse, etc. From a management perspective, the CEO has full power in running the organization thereby resulting in actions being undertaken without being questioned.
2. Opportunity: The opportunity for an employee to commit fraud. Opportunities to commit fraud are usually caused by several things, including: control from the company is still weak, SOPs that are running are not conducive, the existence of multiple jobs in an employee, and the work situation is not conducive.
3. Capability: Knowledge of systems and the ability to manipulate others. From a staff member perspective, being the only persin highly knowledgeable about a key financial system for example and knowing that tracing all activity can be easily altered is a good avenue for fraudulent actions to take place. From a management perspective, the ability to use financial systems to inappropriately manipulate numbers is also a good example of capability.
4. Rationalization: When a fraudulent act has been detected, usually the perpetrator will give a rational reason as a form of self-defence. This rationalization occurs to make the error that occurs is a reasonable action to take.

Fraud Tree

According to (Tuanakotta, 2012) in his book, it is written that the Association of Certified Fraud Examiners (ACFE) is a professional organization that aims to eradicate fraud. ACFE classifies fraud in the form of three main branches followed by more specific branches, known as the “Fraud Tree”.

The ACFE divides Fraud into 3 (three) types or typologies based on actions, namely:

1. Asset Misappropriation;
   Asset misappropriation includes misuse/theft of assets or property of the company or other parties. This is the easiest form of fraud to detect because it is tangible or can be measured/calculated (defined value).
2. Fraudulent Statement;
   Fraudulent statements include actions taken by officials or executives of a company or government agency to cover up the actual financial condition by carrying out financial engineering in the presentation of its financial statements to gain profits or may be analogous to the term window dressing.
3. Corruption.

This type of fraud is the most difficult to detect because it involves cooperation with other parties such as bribery and corruption. This is the most common type in developing countries where law enforcement and awareness of good governance are weak, so the integrity factor is still questionable. This type of fraud often cannot be detected because the parties working together enjoy the benefits (symbiosis mutualism). This includes abuse of authority/conflict of interest, bribery, illegal receipts (illegal gratuities), and economic extortion.

Forensic Accountants

According to (Tuankotta, 2010), Forensic accountants are registered and certified accountants who have obtained additional education or certification as a fraud examiner or as a forensic accountant. The forensic accountants will utilize their knowledge in accounting, auditing and law, investigation and criminology to disclose fraud, find evidence, and present the evidence to court, if needed.

Forensic accounting services can be used in the public and private sectors in Indonesia. The utilization of forensic accounting services in the public sector is more prominent than the private sector due to greater number of cases. Another reason is the tendency to resolve private sector disputes out of court (Tuanakotta, 2014).

Forensic accounting is a variety of accounting and investigation techniques used to find financial fraud. Forensic accounting requires accounting, auditing, and investigative skills in examining the finances of individuals or businesses. Forensic accounting provides accounting analysis suitable for use in legal proceedings and is often used in cases of fraud and embezzlement in court. In the public sector (government), the stages in the forensic accounting series are divided among several institutions. There are institutions that carry out financial audits, government internal control institutions, court institutions, and institutions that fight crime in general and corruption in particular, such as PPATK, KPK, and other non-governmental organizations (Tuanakkota, 2014).

The position in forensic accounting is often referred to as forensic accountants, who analyze, interpret, and summarize complex financial and business issues. Accountants may be employed by insurance companies, banks, police, government agencies, or public accounting firms. They compile financial evidence, manage the information collected, and communicate their findings in the form of reports or presentations.

Along with giving witness in court, a forensic accountant may be asked to prepare visual aids to support trial evidence. For business investigations, forensic accounting requires the use of traceability funds, asset identification, asset recovery, and due diligence reviews.

The Scopes of Forensic Accountants

According to (Nyoman, 2010), there are various types in the scopes of forensic accountants and are usually grouped by type of legal process. Here are some common examples:

1. Tax Avoidance or Fraud
   Some individuals and businesses claim false information about their financial situation to avoid paying taxes. Forensic accountants track income to determine the extent of tax fraud committed. They can also use the data to prove that the accused company did not commit tax fraud.
2. Securities Fraud
   When stockbrokers or organizations make false claims about information that investors use to make decisions, they are committing securities fraud. Forensic accountants work to help investors avoid these scams and uncover companies involved in securities fraud.
3. Money Laundering
   Money laundering makes it difficult for forensic accountants to trace illegal money. Strong analytical and accounting skills are required for them to solve these crimes and find the original source of funds.
4. Disputes in Family and Marriage
   Fraud can also occur in families and marriages. Whether hiding money or using relationships to steal funds, forensic accountants help resolve these situations. While these crimes usually occur on a smaller scale than scandals with larger corporations, family and marital disputes can still be very damaging.
5. Economic Loss of Business and Bankruptcy

When a business suffers a severe economic loss or bankruptcy, forensic accountants can play a valuable role in the recovery process. They sometimes find evidence of fraud that can help a business regain its footing.

6. Hidden or Misappropriated Assets
   Misappropriated assets may appear to be embezzlement, fraud, or theft. Individuals or businesses may also hide their assets, intentionally leaving them off the balance sheet so as not to be owned by other individuals or entities. Financial accountants work to uncover these discrepancies and hold people and companies accountable for their finances.
7. Insurance Claim
   False insurance claims are a common way for individuals to profit from lies involving the protection of their assets, for example, false claims such as theft or a house fire. Forensic accountants carefully look at the facts surrounding these claims to determine their validity.

Forensic Accounting Stages and Procedures

Forensic accounting audits require a different type of handling than financial statement audits. Each situation requires a unique protocol. This process involves an initial investigation, a report of information, and final litigation. The information below explores forensic accounting investigations and the importance of the special skills of forensic accountants while conducting research to make claims.

1. Investigation
   Forensic accountants usually initiate investigations and collect evidence when fraud suspicion is established. They may interview staff at a company to get more information and try to find the individual behind the scam. Using the information gathered, they begin to make hypotheses about what happened and create a follow-up plan to continue assessing the business. Once this step has reached completion, they determine what further action is required and convey this information to the company.
2. Reporting
   After forensic accounting professionals collect information/data and develop a case, they present a summary of their findings. Using this information, they determine how the fraud occurred and who played a role. Then, they determine how to handle the case and suggest the next steps the company should take. Additionally, they may recommend some ways to prevent these incidents in the future by improving/strengthening internal security. After submitting their report, the forensic accountants prepare for their role in the litigation related to the case.
3. Litigation
   The final step of the forensic accountant process is as an expert witness in the court related to the case. Accountants present their findings as evidence in court and testify against violators. Accountants explain any evidence and interpret financial documents in understandable terms, presenting how they identify the subject. This means that they need not only to seek evidence but also to use sensible rhetoric in court. Once this step is complete, the court will make a final decision on the situation. They play an important role during this process.

RESEARCH METHOD

This research employed a qualitative method, a research carried out with the aim of finding and describing, and participating in explaining quality and privilege of social influence that cannot be explained using a quantitative approach (Sugiyono, 2011). ” Qualitative research method is a type of research that produce findings that are not obtained using statistical procedures or other methods of quantification (Sayidah, 2018)

The data source in this research used secondary sources, which are data sources that can be obtained by reading, studying, and understanding through other media sourced from literature, books, and documents (Sugiyono, 2012). The data used in this study were secondary data obtained through ACFE (Association of Certified Fraud Examiners).

The data collection technique used in this research was documentation, by collecting company data on the internet and also books containing the information needed in this study.

RESULT

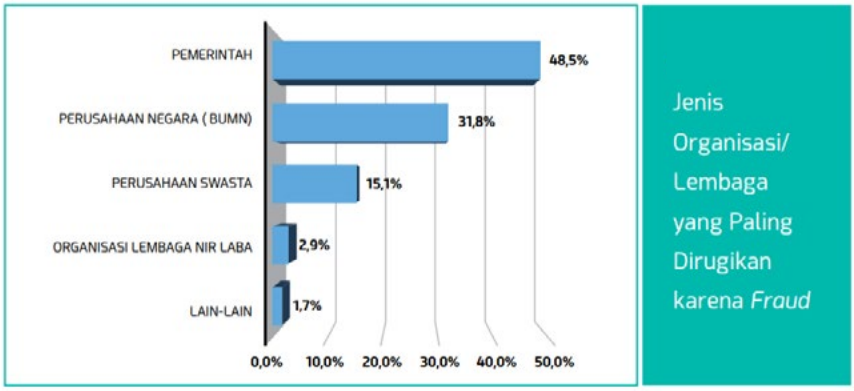
Fraud in Indonesia

Based on the results of a survey by ACFE Indonesia to 239 certified forensic acountans of respondents, it showed that the most common fraud in Indonesia is corruption with a percentage of 64.4%, then Misuse of State and Company Assets/Wealth with a percentage of 28.9%, and Financial Report Fraud at 6.7%.

The results of this survey are different from the Report to The Nations 2018, which shows that the largest fraud occurs, namely asset abuse as much as 89%, then corruption 38%, and Financial Report Fraud 10%. One of the differences in the results of this study is indicated by the frequency of publications of corruption scandals in Indonesia, as presented by the Corruption Eradication Commission (KPK) in the recapitulation of corruption investigations which increased from 2004 to 2018 (KPK, 2018).

This is in line with the framing theory that there is an individual's cognitive tendency to respond to various situations based on the context and available information, causing the potential for cognitive bias to occur. Thus, along with the development of a variety of information, Indonesia is in the assessment of corruption scandals as fraud cases that are widely developing in Indonesia.

Government institutions are the most harmed organization by fraud case



;overnment institutions are most of the exposed fraud ons. Furthermore, the other organization which also harmed by fraud are state-owned company (31,8%), private-owned company (15,1%), non-profit organization (2,9%), and other organizations (1,7%)

The Roles of Forensic Accountants in Fraud Disclosure

The survey shows that Forensic Accountant is ranked at third position (15,1%) after Media Report and Internal Audit as media alternative for fraud detections. This result gives early indication that Forensic Accountant role is considered as an effective way to reduce loss resulted by fraud act.

Discussion

This study aims to explore the role of forensic accountants in disclosing fraud in Indonesia. From the analysis conducted by ACFE, 2019, it can be concluded that the roles of forensic accountants in Indonesia are as follow:

1. Forensic accounting is an accounting science that is special. To have a Certified Forensic Audit degree, they must take special education in the field of forensics/law. Accounting plays a role in uncovering fraud if it has multiple disciplines, including deductive analysis, critical thinking, unstructured problem solving, and knowledge of the law.
2. Fraud in Indonesia occurs because of incentive, opportunity,capability, and rationality to enrich oneself, others and can harm the state. The biggest loss and type of fraud in Indonesia is corruption. For 15 years, starting from 2004, the KPK has found 1135 corruption cases, but only 610 can be executed. The role of forensic accountants in helping uncover corruption cases is by being an expert witness in court, daring to speak out for the truth, and showing the cash flow that occurs.
3. There are three roles of forensic accountants i.e. prevention, detection, and investigation. The easiest prevention that can be done for the accounting profession is a control system. Detection can be done in financial reports, and investigation can be done by utilizing whistle-blowing or reports made by employees and forensic accountants at BPK, KPK, BPKP, and KPK who have reported a case to court. For the company itself, there are several ways that can be done to prevent fraud, including forming individuals in which there is trust to prevent conflicts of interest, establishing a work support system that includes an integrated system, and establishing a monitoring system that includes self-assessment control.
4. There is no special institution that oversees forensic accountants because this profession is needed if there is a request or a case that must be resolved. If an institution such as KAP, BPK, BPKP, and KPK requires a forensic accountant to audit a financial report, the task will stop at the financial report, but if it has been forwarded to legal channels, law enforcement officers (APH) will ask the forensic accountant to speak up. In addition to reporting in writing and in great detail, reports also need to be presented if the forensic accountants are needed as expert witnesses in the trial of their case. Usually, this report is also not widely published. Only certain parties and institutions are allowed to access it. So, the role of forensic accounting science in Indonesia depends on the position of a forensic accountant assignment.
5. In 2019 Indonesia was ranked 89th for the most corruption-free country out of 180 countries. This figure has increased compared to 2018 at position 96. This increase is due to the attention given to the role of forensic accountants, although they do not fully play a role but are quite helpful in disclosing fraud. Forensic accountants will play an active role if a fraud is in accordance with the domain of forensic accounting science, such as checking in financial reports and in every documented transaction. However, without documents and reports, a forensic accountant does not play a role in uncovering fraud.

Conclusion

It can be concluded that forensic accountants have a role in disclosing fraud in Indonesia but not as a major role in disclosing fraud. Forensic accountants will take a role if they are in accordance with their scientific field, such as checking in financial reports and in every documented transaction. However, without documents and reports, a forensic accountant does not play a role in uncovering fraud.. They should further improve their abilities and study other disciplines and are expected to be more confident and courageous in giving statements for the sake of truth.

Limitations And Suugestions For Further Research

The limitation of this study is that it did not conduct research directly on the sources, namely forensic accountants. This research entirely employed data from the research conducted by ACFE Indonesia. The implication for future research is that future research should improve the way to uncover fraud through forensic accounting science by conducting direct observations independently and extending the observation period because the longer the observation period, the better the results. In addition to extending the observation period, it is better to use all factors in the fraud diamond, such as incentive, opportunity, capability, and rationalization factors, as well as updating documents that support research.

For further researchers who are interested in the forensic accounting profession, it is advisable to conduct a study on a special case, regardless of fraud type. Then, the observation technique also needs to be done to avoid the weaknesses in the study. Therefore, researchers will understand much more and get more satisfying results.

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LITERATURE STUDY : Corporate Governance for Sustainability Reporting period 2016 – 2020

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Abstract
The purpose of this paper is to review corporate governance research for sustainability reporting in the period 2016 – 2020, descriptive approach to answer the research objectives, theories, research methods used and research findings. Corporate governance research for sustainability reporting is traced through articles published in Emerald Insight (Emerald Publishing Limited) with the subject category of management accounting. The unit of analysis is articles on management accounting topics and sustainability issues. A total of 100 articles were examined and 5 articles were obtained for review. The results of the research are the first, good corporate governance through corporate governance components will have an impact on sustainability reporting. This will certainly add value to the company. Second, some of the theories used are the components of corporate governance, agency theory, and ownership theory. The third is that the methods used in the research are all secondary (quantative) data, where the data obtained are based on the company's annual reports and GRI published on the Stock Exchange (Indonesia, Australia, Sri Lanka and Malaysia).
Keywords: **Corporate Governance, Sustainability Reporting**
JEL Classification: [example: D43, L12, G32]
The authors should add 1- 3 JEL Classification Number. Information guide for the Journal of Economic Literature *(*JEL) can be found at https://www.aeaweb.org/jel/guide/jel.php

INTRODUCTION

Sustainability reporting is based on the practice of measuring, disclosing, and being accountable to both internal and external stakeholders towards organizational performance with sustainable development goals (global reporting initiative, 2006). Voluntary reporting practices that demonstrate social inclusion and environmental concerns in business operations as well as in interactions with stakeholders (marrewijk and were, 2003). Sustainability reporting can be considered as a new trend in corporate reporting that integrates financial, environmental and social performance of companies into one report (zwetsloot and marrewizk, 2004; kpmg, 2008; krajnc and glavic, 2005; christofi et al., 2012).

Although these benefits are very good it seems that some companies are still reluctant to adopt this practice because it involves additional responsibilities and challenges for the company. Some of them must be data consistency, balance between positive and negative information, continuously improve performance and keep reports readable and concise (ernst and young, 2010). So that what has been considered an expense, of course, is no longer necessary because of increased operating costs (mcwilliams and siegel, 2001) and will have less to offer to investors (bower, 2010). Sustainability reporting (also called environmental, triple bottom line, corporate responsibility reporting) is a broad term for reporting on the economic, environmental, and social impacts of business operations (milne and gray, 2013; schmidheiny, 2006).

The sustainability reporting research literature in developing countries mainly focuses on the motivation for adoption or sustainability reporting and related determinants (eg islam and deegan, 2008; liu and anbumozhi, 2009; amran and haniffa, 2011; baje et al., 2020). These studies use a quantitative approach (eg rizk et al., 2008; liu and) anbumozhi, 2009; orazalin and mahmood, 2019) or qualitative approaches (eg de villiers, 1999; belal and owen, 2007; momin and parker, 2013; ismail and zakaria, 2020). Quantitative studies apply content analysis to indirectly explore the motivations behind sustainability reporting (sr; e.g. Haniffa and cooke, 2005; khan et al., 2013; wutticindanon, 2017; mudiyanselage, 2018).

Corporate governance has been widely studied, but only this research is expanded to see the relationship between corporate governance and sustainable reporting mechanisms. Studies have found that strong corporate governance mechanisms increase the level of corporate disclosure in general (lakhal, 2005).

Corporate governance refers to the ways in which suppliers of capital seek to ensure that their capital is managed properly and wisely. Moreover, even casual readers of financial news know that companies can experience disruptions in their governance, sometimes even fatal ones (benyamin & michael, 2017).

Corporate governance has a close relationship with corporate social responsibility within the company, especially in traditional to modern concepts related to disclosure. Several years ago, the company only prioritized financial reports as an indicator of success. But nowadays, companies have a different paradigm about it. The company has concern for stakeholders, not just shareholders, because stakeholders can have a big impact on the company. Stakeholder theory says that the company's main focus is stakeholders, such as: banks, suppliers, customers, and the government (andayani, atmini & mwangi, 2008). Governance that is carried out well by the company will certainly be very beneficial both from internal and external sides, so that in making a sustainability report by the company it will be very supportive. Which in the end the stakeholders can get a true picture of the condition of the company and can later be used for decision making.

This research study began with an interest in uncovering the relationship between elements of corporate governance and the dimensions of sustainability disclosure. In the context of this research, there is a need for research that uncovers the potential relationships between the different elements of corporate governance and sustainability reporting.

This study aims to conduct studies of the selected articles by answering the following questions:

1. The aim of the research
2. The theory used in research
3. The method used in the research
4. The research results

LITERATURE REVIEW

SUSTAINABILITY REPORTING

Sustainability reporting is the disclosure and communication of environmental, social and governance objectives and the company's progress towards those goals. The benefits of sustainability reporting include improving the company's reputation, building consumer trust, increasing innovation, and even improving risk management. Sustainability reports have various definitions, according to Elkington (1997) sustainability reports mean reports that contain not only financial performance information but also non-financial information consisting of information on social and environmental activities that enable companies to grow sustainably (sustainable performance). Sustainability report or sustainability report according to Global Initiative Reporting (2018) is “a report on the economic, environmental, and social impacts caused by daily activities published by a company or organization”. Sustainability reports can be referred to by various terms, namely corporate social responsibility (CSR), non-financial reports, triple bottom line reports , and others.

The concept of sustainability, first used officially in 1987, was published in a report entitled “ Our Common Future ”. That this report states was first put forward by the Club of Rome about the challenges facing mankind in the 21st century (Meadows and Meadows, 1972 as quoted in Akgul: 2010). The increasing popularity of the sustainability concept, awareness of the development-environmental relationship and changing content are attributed to Brundtland's “ Our Common Future ” report . It was presented to world public opinion in 1987 and prepared by the World Commission on Environment and Development (Şen, et al., 2018). Several different definitions in the literature on sustainable development are “The important point in this definition is that future generations are accepted as stakeholders of the present generation” (Çalışkan, 2014).

Corporate Governance

Corporate governance is a broad term that describes the processes, customs, policies, laws, and institutions that direct organizations and companies in how they act, manage and control their operations. This governance serves to achieve organizational goals and manage relationships between stakeholders. The importance of corporate governance is emerging in modern companies because of the separation of management and ownership control in organizations.

The Cadbury report is entitled Financial Aspects of Corporate Governance . This report provides some guidelines and recommendations on corporate board structure and accounting systems to mitigate risks and failures (Cadbury, 1992). Furthermore, Blair's research shows that corporate

governance is a set of legal, cultural and institutional arrangements that determine what public companies can do. The best practice principles of corporate governance and show that these principles are gathered around the world and each country only distinguishes itself in implementing corporate governance (Stephanie, 2005). Also, it shows who controls them, how that control is exercised and how the risks and returns from the activities they perform are allocated (Blair, 1996)

The prominence of corporate governance in organizational settings was mainly developed in the second half of the last century. Llaci (2012), informs that corporate governance reform was found in the 20th century, while in 1930 there was a mismanagement of corporate governance. As a result, in 1934 reforms governing ownership and governance were approved in the US. Corporate governance became especially important after 2002 when large corporations such as Enron, Tyco, Adelphia WorldCom and Global Crossing were accompanied by major government scandals (Monks and Minow, 2004). The main function of corporate governance , Cudbury Report, UKSHA (1992), argues is to regulate and control the company through which the board of directors is responsible for corporate governance while retaining shareholders who are responsible for electing board of directors members and auditors.

Thus, the relationship between owner and manager is built on effective contract execution (Jensen & Meckling, 1976; Hill & Jones, 1992; Hart, 1995). For Arjoon (2005), corporate governance is a mechanism that ensures the interests of shareholders are not only in line with their own interests but also other stakeholders. An effective corporate governance in turn, leads to an effective and efficient offering of products and services (Siebens, 2002).

Various benefits and advantages obtained by implementing good corporate governance such as companies can minimize agency costs, namely costs that arise as a result of the delegation of authority to management, including the cost of using company resources by management for personal interests as well as in the context of monitoring the behavior of management itself. ; the company can minimize the cost of capital, namely the cost of capital that must be borne when the company applies for loans to creditors. This is the impact of good and healthy corporate management which in turn creates a positive reference for creditors; the decision-making process will take place better so that it will produce optimal decisions, can increase efficiency and create a healthier work culture; Because in the practice of good corporate governance, employees are placed as one of the stakeholders that should be managed properly by the company, so employee motivation and job satisfaction are also expected to increase. This increase in the next stage will certainly be able to increase productivity and a sense of belonging to the company; the level of trust of stakeholders to the company will increase so that the positive image of the company will increase. (Jojok, 2009).

Corporate Governance for Sustainability Reporting

Although sustainability disclosure has gained a share among corporate practices, there is some dearth of standard criteria for reporting. However, in order to reach some consensus on sustainability and its implementation, a key aspect is acceptance of the premise that, in order for a business to be sustainable in the long term, it must be socially responsible. Motivation is basically reputation, competitive advantage, and fashion (Melé, 2005). In addition, several empirical studies show that the involvement of sustainability stakeholders has a positive effect on brand value and increases the credibility of the company (Torres, Bijmolt, Tribó and Verhoef, 2012). Regarding consumers, positive belief in sustainability is associated with greater purchase probability and greater loyalty to the company in the long term (Du, Bhattacharya and Sen, 2007). The benefits of an appropriate sustainability strategy also include positive effects on employees and investors (Sen, Bhattacharya and Korschun, 2006).

On the other hand, from a stakeholder point of view, stakeholder theory states that companies have responsibilities towards other stakeholders, which include customers, suppliers, government, employees, and the public (Ferrell et al., 2010). Sustainability reporting by companies is considered a significant issue for various stakeholders. McElroy and Van Engelen (2012) argue that stakeholders play an important role in ensuring that companies manage, measure and report on their sustainability strategies. Thus, a company is not only based on profit maximization, but also on maximizing the value of sustainability (Martirosyan and Vashakmadze, 2013). Consideration of the needs and interests of stakeholders is the main driver of business continuity (Foley, 2001). Parmigiani et al. (2011) stated that the disclosure preferences of stakeholders may vary according to the level of power, legitimacy and urgency (Mitchell et al., 1997), which can affect the significance of sustainability reporting.

Since Brundtland's (1987) report on sustainable development, the importance of environmental issues and the pursuit of sustainable development have been on the agenda of both the government and corporate sectors (Bebbington and Gray, 1993). Organizational stakeholders need greater transparency and accountability than ever before. In order to demonstrate an organization's contribution to sustainable development, sustainability reporting is considered by many as necessary to fully inform stakeholders about an organization's activities and performance (Lamberton, 2005; Milne and Gray, 2007; Guthrie and Farneti, 2008). Sustainability has become of international importance, as demonstrated in United Nations publications, such as the Global Compact and the Principles of Responsible Investment (IoD, 2009). Sustainability reports cover the economic, social, and environmental aspects of an organization's performance. Sustainability reports are the most operative tool for organizations to communicate with stakeholders (Tenuta, 2010). Organizational activities and achievements should be reported from a holistic perspective. Internationally, the Global Reporting Initiative (GRI) is considered a best practice reporting framework (Smith and Scharicz, 2011; Fonseca et al., 2011).

Corporate governance is emerging as a potential solution to agency problems, a broader view of corporate governance concentrating on protecting stakeholder interests (Canadian Institute of Chartered Accountants, 1995; Donnelly and Mulcahy, 2008). Therefore, it is expected that a company that effectively manages its governance system will have a positive effect on the company's overall performance, both financial and non-financial. Corporate governance encourages companies to promote ethics, fairness, transparency and accountability in all their dealings (Jamali et al., 2008) and promotes a disclosure-based environment in which managers are forced to act in the interests of shareholders and stakeholders (Hamilton, 2004). Performance or performance is a pattern of actions carried out to achieve goals that are measured based on a comparison with various standards. Performance is the achievement of a goal from a particular activity or job to achieve company goals as measured by standards (Protalo, 2007).

Corporate governance plays an important role in financial reporting. Michelon and Pabonetti (2012) argue that good corporate governance and sustainable reporting are complementary mechanisms that enhance the relationship between stakeholders and companies. They specifically assert that sustainable reporting is a function of the board of directors (Cartwright & Craig, 2006; Ceran, 2017). Many studies have examined these two issues separately. One of the main reasons for this is that the concept of corporate sustainability is difficult to measure (Ceran, 2017). An efficient and effective board is essential for better performance (Vafeas, 1999). The ideal board size varies between 5 and 16 depending on the size, industry, complexity, and nature of the organization. Larger boards are thought to acquire a wide range of resources at a lower cost and result in better performance. The decision of the board of directors also plays an important role in determining the level of voluntary disclosure. Laksmana (2008) establishes a positive relationship between board size and the level of voluntary disclosure. A large board offers a wide range of knowledge and expertise that acts to reduce principle-agency conflicts and bring different perspectives into the organization (Said et al, 2009; Ahmed, 2013). According to Janggu (Janggu et all, 2014), large boards have greater influence on sustainability issues. Similarly, according to Shamil and Krishnan (2014), large companies have large boards of directors, and these companies want to improve their sustainability reporting.

The representation of independent directors on the board is considered a key element of corporate governance. A director who does not have a business and family associated with top management of the company is generally considered to be independent (Borowski, 1983). The independent director acts as a supervisor and plays an important role to ensure that the company is managed properly (Said et al, 2009). Independent directors strengthen the board and ensure that the interests of investors and stakeholders are protected. Boards with a high percentage of independent directors are considered more effective in monitoring and controlling management (Cheng & Courtenay, 2006; Ahmed & Adam, 2006).

Despite the progress made to understand the impact of CG characteristics on corporate sustainability, there is still room to investigate this relationship more thoroughly (Walls et al. 2012). Complete understanding requires exploring more detailed relationships between governance characteristics and sustainability measures. Several attempts have been made to understand this relationship, but no empirical contribution takes into account the three dimensions of sustainability performance (SP hereafter) in this given relationship. Recently, Walls et al. (2012) note that firms with

more independent boards and exhibit higher gender diversity have higher environmental performance; Their study covers the environmental dimension only. Likewise, many others such as Brammer and Pavelin (2006) and Rodrigue et al. (2013) linking corporate governance and environmental disclosure, while Mallin et al. (2013) added social disclosure. Similarly, there is also some literature investigating the relationship between corporate governance , social disclosure (Haniffa & Cooke 2005), and performance (see e.g. Wang & Coffey 1992, Williams 2003, and Johnson & Greening 1999).

The relationship between corporate governance and sustainability reporting is an important area to study because they can bring benefits such as increasing the reputation and profits of the company, increasing company transparency, increasing investor confidence, and many other benefits. Corporate governance and sustainability practices are closely related to each other (Bhimani & Soonawalla, 2005). Corporate governance and sustainability practices also emphasize the importance of achieving long-term social, environmental and business values which in turn will help to promote the acceptance and existence of a sustainable business (Esa & Ghazali, 2012). The concepts of corporate social responsibility and disclosure have been unified, to ensure better governance (Perrini, 2005; Said et al. 2009). In addition, Shavit & Adam (2011) state that the need for disclosure and transparency can ensure better governance and increase long-term shareholder value. Moreover, Baldarelli & Gigli (2011) note that sustainable development initiatives reward firms in terms of superior performance as well as persistent profitability.

METHODS

This paper describes research on corporate governance for sustainability reporting for the last five years (2016 – 2020). The data were obtained from articles on the topic of corporate governance for sustainability reporting published in journals included in Emerald Insight (Emerald Publishing Limited) with the subject category of management accounting. Then search for the keyword “Corporate Governance” in each article. The description is done by answering questions, namely the first research objective; both theories used in the research; the three research methods used; the four research results.

RESULTS

Research on corporate governance for sustainability reporting is traced through articles published in journals included in Emerald Insight (Emerald Publishing Limited), which specifically publish articles in the field of management accounting. This study uses the keywords ' corporate governance, sustainability reporting' in searching for articles. Articles are searched online in each journal via https://www.emerald.com/insight/search?q = accounting + management. The journal data used are journals published during the 2016 – 2020 period and obtained as many as 100 journals. Of the 100 journals examined, 5 articles were published.

Table 1. Search results for articles on the topic of Corporate Governance for Sustainability Reporting from Emerald Insight , 2016 - 2020 Period

No	Year	Articles	Keywords “Corporate Governance”	%
1.	2016	17	0	0%
2.	2017	21	0	0%
3.	2018	30	3	10%
4.	2019	17	1	5.88%
5.	2020	15	1	6.67%
Total Articles		**100**	**5**	**5%**

Table 1 shows that the total articles published during the 2016 – 2020 period by Emerald Insight (Emerald Publishing Limited) were 100 articles, and from 100 articles there were 5 articles that appeared with the keywords 'corporate governance' and 'sustainability reporting' with article details. The articles obtained in 2018 were 3 articles from 30 published articles, articles in 2019 were one article

from 17 articles and one article in 2020 from 15 published articles, so the number of articles to be analyzed was five articles.

Table 2. Five Articles Analyzed

Year	Title	Authors	Journal and Number
2018	Corporate governance and sustainability reporting in the Australian resources industry: an empirical analysis	Ong, T., & Djajadikerta, HG	Social Responsibility Journal, Emerald Publishing Limited, December 2018, https://doi.org/10.1108/SRJ-06-2018-0135
2018	Board involvement in corporate sustainability reporting: evidence from Sri Lanka	Rathnayaka Mudiyanselage, NCS	Corporate Governance: The International Journal of Business in Society, Emerald Publishing Limited, April 2018, https://doi.org/10.1108/CG-10-2017-0252
2018	The effect of stakeholder pressure and corporate governance on the quality of sustainability report	Rudyanto, A., & Veronica Siregar, S.	International Journal of Ethics and Systems 34(2), 233–249 , Emerald Publishing Limited , March 2018, https://doi.org/10.1108/IJOES-05-2017-0071
2019	Sustainability reporting in Indonesian listed banks : Do corporate governance, ownership structure and digital banking matter?	Amidjaya, PG, & Widagdo, A. K	Journal of Applied Accounting Research, 21(2), 231–247, Emerald Publishing Limited, 2019, doi:10.1108/jaar-09-2018-0149
2020	The inuence of corporate governance structure on sustainability reporting in Malaysia	Jamil et al	Social Responsibility Journal, Emerald Publishing Limited, August 2020, ISSN 1747-1117, DOI 10.1108/SRJ-08-2020-0310

DISCUSSION

Based On Table 2, It Describes The Profiles Of The Five Articles Found In The 2016 – 2020 Period, Consisting Of Three Articles Published In 2018, One Article In 2019, And One Article In 2020.

Article 1: Corporate governance and sustainability reporting in the Australian resources industry: an empirical analysis

Article (1) This study aims to describe the existence of independent directors, the proportion of independent directors, dual directors and female directors will have an impact on the disclosure of sustainability reporting (Jensen & Meckling, 1976; Fama & Jensen, 1983; Adam & Ferreira, 2009)

Article (1) The theory used in this article is to use the theory of board composition described by Jensen & Meckling (1976) where the existence of the composition of the board of directors (independent, proportion, independent or dual and women) has an impact on making sustainable reporting. So that the components in corporate governance can lead to the making of sustainability reporting (Fama & Jensen, 1983; Adam & Ferreira, 2009).

Article (1) The results of this study show a significant positive correlation between the composition of company gods in supporting better corporate governance mechanisms for sustainability

reporting, including the proportion of independent directors, dual directors and female directors on the board. The results are in accordance with research from Gibson & O'Donovan (2007) that corporate governance is closely related to sustainability reporting. The results of this study have many practical implications for regulators, investors, shareholders, and managers who rely on financial and non-financial information to formulate policies and make business decisions.

Article 2: Board involvement in corporate sustainability reporting: evidence from Sri Lanka

Article (2) This study aims to exploit the role played by company directors in conducting sustainability reporting. The basic concept of sustainability disclosure has been expanded with the aim of realizing market benefit capital (Shamil et al., 2014). Empirical studies have widely reported that heterogeneous (multiethnic) boards positively affect sustainability disclosure (Haniffa & Cooke, 2005; Hafsi & Turgut, 2013; Ntim & Soobaroyen, 2013).

Article (2) The theory used is about agency where agency theory states that the active involvement of the board of directors is rather important, because it can closely monitor the opportunistic behavior of managers, and will be able to reduce agency costs and can increase information symmetry (Jensen & Meckling, 1976) . The imbalance between the availability of agent and principal information is known as information asymmetry, so that it can hinder the ability of the owners to monitor the manager's self-interest activities (Anwar, 2016). Similarly, sustainability reporting as an integral part of the entity's voluntary disclosure activities becomes an important means to deal with any information asymmetry problems (Fuhrmann et al., 2016).

Article (2) The results of this study are the existence of a positive influence between the representation of women directors and sustainability reporting. However, dual leadership structure, board ethnicity and board ownership are not statistically significant with sustainability disclosure although they show a slightly negative relationship with sustainability disclosure. Board involvement can be identified as vital in determining sustainability disclosure options.

Article 3: The effect of stakeholder pressure and corporate governance on the quality of sustainability report

Article (3) This study aims to obtain the factors that influence sustainable reporting such as employees, shareholders, board of commissioners and family ownership. Stakeholder pressure and components of corporate governance affect the quality of sustainability reporting. The environmental components, employees, consumers, and shareholders are stakeholders, while the effective board of commissioners and family ownership are used as components of corporate governance. Duh and Belak (2009) found that family-owned companies have more ethical concerns than others, which triggers sustainability.

Article (3) The theory used is stakeholder theory. Stakeholder theory develops legitimacy theory, which states that organizations should act ethically and legitimately in the way stakeholders think , assuming all stakeholders have a “universal attribution of “moral personality” (Deegan & Unerman, 2011; Cragg, 2002). Stakeholders provide orientation, i.e. the direction to distinguish right from wrong, to the organization's managers to say how the company should live (Becker 2010). Stakeholders provide orientation on how the leadership of the organization to maintain and maintain the quality of life and then continuously improve it which is important because of the way the company treats the environment in doing business, which is defined as sustainability.

Article (3) The research results of this article show that consumers as the main stakeholders have a higher quality sustainability report than companies that do not have consumers as the main stakeholders. Shareholder pressure does not affect the quality of the sustainability report. This shows that shareholders do not have high moral awareness and do not pay attention to sustainability reports in determining which companies they should invest in. However, the effectiveness of the board of commissioners has a positive effect on the quality of the sustainability report.

Article 4: Sustainability reporting in Indonesian listed banks : Do corporate governance, ownership structure and digital banking matter?

Article (4) This study aims to reveal the effect of corporate governance , digital banking and banking regulatory approaches on sustainability reporting. The interests of stakeholders are brought to

the company by their representatives, the board of commissioners which means that the board of commissioners brings every request for disclosure of information.

Article (4) The theory used in the research is agency theory where stakeholders as principals and managers as agents must be able to work together to produce good quality sustainability reporting. Therefore, more disclosure of information is needed to keep the company accountable. One of the disclosures that stakeholders need is a sustainability report. A complementary view of agency theory states that agency relationships can occur between stakeholders as principals and managers as agents (Mantysaari, 2010; Hill & Jones, 1992).

Article (4) The results of this study show that there is a strong influence between corporate governance and sustainability reporting. The stronger the corporate governance , the better the sustainability report produced. Good corporate governance implementation can motivate companies to pay attention to sustainability issues as one of the stakeholder interests. Likewise, other components of corporate governance such as foreign ownership and family ownership also greatly affect sustainability reporting.

Article 5: The inuence of corporate governance structure on sustainability reporting in Malaysia

Article (5) This study aims to examine whether the best practices of corporate governance structures (represented by board independence, board capital and corporate governance compliance) lead to higher sustainability (quality of sustainability reporting). And it is also hoped that agency conflicts between shareholders and managers can be minimized and as a resource provider experienced directors will be more appreciative of the company's sustainability issues in terms of disclosure of sustainability reporting.

Article (5) This study uses the theory of corporate governance which includes agency theory, stakeholder theory, resource dependency theory, management theory and legitimacy theory (Yusoff & Alhaji, 2012). According to Ho & Taylor (2013) and Rao et al. (2012), variations in sustainability reporting by companies can be explained by various corporate governance structures. The board of directors is an important internal mechanism of corporate governance and is expected to play two roles (Hillman et al., 2000; Hillman & Dalziel, 2003). The first is the agency role, which includes management monitoring to mitigate agency costs. Then the second role is resource dependence, where the board is expected to provide strategies and resources for the survival and success of the company.

Article (5) The results of this study highlight the importance of board capital, particularly training and experience, in improving corporate sustainability practices. Awareness and understanding of sustainability issues may prove to be important in company decisions, which can affect all stakeholders including the community in particular those around them. Continuous and effective training of directors including in the field of sustainability will also lead to a better understanding of fiduciary obligations, which in turn helps to enforce good corporate governance and will ultimately provide good sustainability reporting as well.

Table 3. Summary of Study Results

	Article 1	Article 2	Article 3	Article 4	Article 5
1. Purpose	Explain and evaluate the impact of corporate governance (corporate board) on sustainability reporting by resource industry companies	Explore the role played by the board of directors in disclosing sustainability reporting	Explain how stakeholder pressure and its components corporate governance in the preparation of sustainability reporting	Empirically prove that the firm's ownership structure and corporate governance affects	Explain how the influence of the corporate governance structure on sustainability reporting quality based on agency theory perspective and resource dependence theory

				sustainability reporting	
2.The theory used	Company board composition (Fama & Jensen, 1983)	Agency theory (Jensen & Meckling, 1976)	Stakeholder theory (Deegan & Unerman, 2011)	Agency theory (Mantysaari, 2010; Hill & Jones, 1992)	Corporate governance theory (Yusoff and Alhaji, 2012)
3. Method	Using secondary data from the financial statements of companies listed on the Australian Securities Exchange (ASX) Period as of June 30, 2012 A sample of 133 companies	Using secondary data from the annual reports of companies listed on the Colombo Stock Exchange (CSE) Sri Lanka 2012-2016 period. Sample of 100 companies	Using secondary data from reports of GRI 3 and GRI 4 companies listed on the Indonesia Stock Exchange (IDX) 2010-2014 period A sample of 37 companies	Using secondary data from financial statements companies listed on the Indonesia Stock Exchange (IDX) 2012-2016 period A sample of 31 banks	Using secondary data from the financial statements of companies listed on the Main Market of Bursa Malaysia 2010-2014 period A sample of 126 companies
4. Results	There is a significant positive correlation between company boards (independent directors, dual directors and female directors) and sustainability disclosure reporting	The role of the board of directors is to assist the company in carrying out corporate governance in sustainability disclosure	Companies under pressure (environment, consumers, employees and the effectiveness of the board of commissioners) have a higher quality sustainability report than other companies.	There is empirical evidence that governance, foreign ownership and family ownership have a positive influence on sustainability reporting	The existence of a governance structure (represented by board independence, board capital and corporate governance compliance) that leads to better sustainability reporting

Of the five articles described above, there are five articles that specifically discuss the existence of a board of directors as many as three articles (article 1, article 2 and article 5), two articles discussing family ownership and foreign ownership (articles 3 and 4).

Articles discussing the board of directors explain that independent directors, dual directors and female directors. Independent directors generally have stronger and broader engagement with a wider group of stakeholders (Wang and Dewhirst, 1992) and they tend to have a broader perspective which tends to result in greater exposure to reporting requirements (Rupley et al., 2012).). Lipton and Lorsch (1992), stated that multiple directorship positions can affect a company's corporate governance because it will be disrupted so that it can affect their performance in their monitoring role. Rao et al. (2012) also stated that the increasing role of female directors in good corporate governance will provide good quality sustainability reporting.

The article discussing family ownership and foreign ownership explains that the existence of a family owned company is expected to make the company provide added value and ethics in running the company. It is also hoped that foreign ownership will increase the level of implementation of corporate governance in sustainability reporting. Family-owned companies have strong leadership that is concentrated on family leadership. The ethical family that is brought into the company makes the family-owned company a stronger value than others which are the values and ethics of the company (Duh and Belak, 2009). Because foreign investors pay more attention to stakeholders (Craswell and Taylor, 1992), they are expected to carry business strategies that are related to stakeholder interests . Therefore, it is expected that foreign ownership will strengthen the implementation of governance and improve the quality of sustainability reporting.

Of the five articles found and discussed, there are several theories put forward in corporate governance for sustainability reporting, namely agency theory, ownership theory, board composition and also the theory of corporate governance in general. continuity.

Although the researcher chose 5 articles from 100 articles obtained from Emerald Insight (Emerald Publishing Limited) , the types of companies that became the object of research (companies) were very varied and also their locations. The five selected articles all use secondary data. Where the data obtained is derived from annual reports and GRI reports published on the Stock Exchanges of each country, namely the Indonesia Stock Exchange (IDX), Australian Securities Exchange (ASX), Sri Lanka Colombo Stock Exchange (CSE) and Market of Bursa Malaysia (MBM).

Conclusion

This paper reviews research in the field of management accounting, especially on the topic of governance for sustainability reporting. Some of the findings are, firstly, good corporate governance through corporate governance components will have an impact on sustainability reporting . This will certainly add value to the company. Second, some of the theories used are the components of corporate governance , agency theory, and ownership theory. The third is, the methods used in the research are all secondary data (quantative), where the data obtained are based on the company's annual reports and GRI published on the Stock Exchange (Indonesia, Australia, Sri Lanka and Malaysia).

In order for further research to be more developed regarding governance for sustainability reporting, of course further research should carry out developments from this article such as increasing the number of articles and research samples, using data other than quantitative data, taking data not only from Emerald Insight (Emerald Publishing Limited) but also from Science Direct, DOAJ, Elsevier or others

Limitation

The research results are limited to the 5 articles reviewed in the articles published in Emerald Insight (Emerald Publishing Limited). So the generalization of the results requires special attention. And this study adds to the current literature on Corporate Governance and Sustainability Reporting and expands literacy in the field of management accounting.

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Empowering Smes In Indonesia Through The Role Of Microfinance Institutions And Entrepreneurial Competencies

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Abstract
This study aims to analyze and provide empirical evidence of the role of the Microfinance Institutions (MFIs) in improving business performance by mediating entrepreneurial competencies. The role of the MFIs is measured according to its function as a means of providing funds, financial management facilitators, managing management facilitators, and marketing management facilitators. Business performance is measured by sales growth, profit growth, asset growth, employee growth, and market share growth. While entrepreneurial competencies are measured by technical competency, marketing competency, financial competency, and relational competency. The research method uses explanatory method with data collection techniques through questionnaires and interviews. The population was SMEs in the Greater Bandung area of West Java, Indonesia measuring 34,816 with a proportional random sampling technique obtained by a sample of 150 SMEs. The data collected was analyzed using a 5-1 Likert scale and Structural Equation Modeling (SEM). The findings show that Microfinance Institutions play a role in improving business performance but are not significant. Entrepreneurial competencies has a positive and significant effect on business performance. The role of the MFIS becomes greater in business performance by mediating entrepreneurial competencies.
Keywords: Microfinance Institutions, Business Performance, Entrepreneurship Competencies
JEL: G2

Introduction

Microfinance Institutions (MFIs), their existence is important as a facilitator of financial services to reach the poor and SMEs who have not yet benefited from formal financial institutions (Wanambisi & Bwisa, 2013). Informal financial institutions are considered more effective among SMEs because they are more flexible, in terms of conditions and the amount of loans that are not as strict as the banking requirements and the flexibility of credit disbursement. The existence of informal financial institutions is in accordance with the needs of SMEs, which generally require financing according to the scale and nature of small businesses (Machmud, 2009).

Providing financing facilities in an effort to empower SMEs, with the hope that strengthening capital can encourage SMEs ability to run their businesses. The current globalization and high competition made SMEs have to be able to face global challenges, such as increasing product and service innovation, developing human resources and technology, and expanding marketing areas. This needs to be done to increase the selling value of SMEs themselves, especially in order to compete with foreign products that are increasingly flooding industrial and manufacturing centers in Indonesia, given that SMEs are an economic sector that is able to absorb the largest workforce in Indonesia (Sudaryanto & Hanim, A. 2012).

SMEs have unique characteristics in financing, which require adequate amounts of funds, relatively simple procedures and easy access to financial institutions and assistance programs. This is interpreted, the role of microfinance institutions not only in the provision of funds, but also as a facilitator in financial management, human resource management, and marketing, which so far these three factors have become obstacles in empowering SMEs. SMEs that have received financing, have not shown significant growth and expansion in their business performance. (Herlinawati, et al, 2019).

The study explores banks and MFIs playing a role in contributing to the performance of SMEs that have received credit schemes for microfinance banks in Nigeria. (Taiwo, et al, 2010). Habibulla's research (2010) found that MFIs loans can improve the business performance of operators in Bangladesh with indicators of increased sales, asset acquisition and technology. In line with the research of Sayed, G.

& Trivedi, P (2014), which examines the contribution of MFIs to the development of SMEs in Mumbai. The findings show 85 of 110 SMEs experienced an increase in sales volume, profits and physical assets as a result of access to microfinance. The number of loans is significantly and positively related to the performance of SMEs in Kitale Kenya. MFIs must form loan groups and reduce training periods to facilitate quick access to MFIs loans. The number of loans provided by MFIs for SMEs must be increased to enable SMEs to grow into medium scale companies (Wanambisi & Bwisa, 2013).

Empirical evidence of Mkazi's research (2007), that loans from MFIs have less impact on the performance of SMEs for developing countries like Kenya. But not explained the reason for not increasing performance. Similarly, research on the role of MFIs in empowering SMEs in Kiambu County shows that MFIs focus more on their role in channeling funds and do not play an important role in providing business skills training (Gathogo, P.K, 2014), so that SMEs performance is still low.

Thus, capital constraints are not the main factor causing the low performance of SMEs, as revealed by Scarborough & Zimmerer (2008), that the low performance of small businesses is mainly due to the use of traditional technology, lack of capital, managerial aspects and weak decision making, quality of sources low human capital, small business scale, lack of experience and limited financial access as well as lack of creativity and innovation, so they cannot compete in both the local and global markets. These weaknesses can have an impact on the unsuccessful implementation of entrepreneurship, while the core of entrepreneurship is the ability to create something new and different through creative thinking and innovative action (Suryana, 2014).

To face competition, entrepreneurial competencies is an important factor (Ng & Kee, 2013), in an effort to take proactive steps towards the challenges of the business environment. Small business owners generally act as managers, managers and business leaders who lead businesses and also lead people (Zimmerer & Scarborough, 1996, 2004). Entrepreneurial competencies refers to the ability of entrepreneurs to identify and pool resources to start a business which indicates the nature of entrepreneurial competencies as an important concept for improving performance (Hayton & Kelley, 2006).

The results of previous studies explain a significant relationship between entrepreneurial competencies and performance (Sanchez, J, 2012; Sarwoko et al. 2013; Shehnaz et al., 2014, Dharmayantie & Fauzan, 2017). This is in contrast to research conducted by Lopa & Bose (2014) which shows entrepreneurial competencies does not significantly influence performance.

Entrepreneurial competencies in this study, adopted the dimensions of Kuriloff, et al (1993), namely: technical competence, marketing competence, financial competence, and human relations competence where the four dimensions are the main abilities of entrepreneurs to achieve business success. (Suryana, 2014), also refers to the research results of Herlinawati, et al (2019), where the role of microfinance institutions is more focused on channeling funds but has not yet touched on strengthening managerial, marketing, production and financial management capabilities so that after obtaining financing, only financial performance increased.

Other findings show that microfinance institutions have a strong relationship with small business performance. But entrepreneurial competencies plays a partial role in mediating the role of microfinance and small business performance (Rosli & Sidek, 2013). These findings attract researchers to analyze the role of Microfinance Institutions in improving business performance by mediating entrepreneurial competencies.

Literature Review

Microcredit is defined as an extension of small loans (micro loans) to those who are poor, designed to spur entrepreneurship (Rosli & Sidek, 2013). Whereas in the Microcredit Summit (1997), microcredit is a program of giving small amounts of credit to the poor to finance productive activities that they do themselves in order to generate income, which allows them to care for themselves and their families. Micro credit is channeled through Microfinance Institutions.

Microfinance Institutions (MFIs) refer to the Law of the Republic of Indonesia No.1 of 2013

concerning Microfinance Institutions, which are specifically established to provide business development services and community empowerment, either through loans or financing in micro scale businesses to members and the community , savings management, as well as providing business development consulting services that are not solely for profit.

Entrepreneurial competencies is defined as:

1. As primary characteristics such as basic and specific knowledge, motives, traits, self-images, roles and skills which are required for business startup, survival and / or growth (Bird, 1995).
2. Further she suggested competencies can be seen as behavioral and observable. Thus it can be learned and possible to change through intervention such as selection and teaching of entrepreneurship (Man et al, 2002).

To measure entrepreneurial competencies, there are 4 (four) main abilities needed that are balanced so that entrepreneurship is successful (Kuriloff, Arthur H. et al, 1993), namely:

1. Technical competence, which has competence in the field of design in accordance with the type of business to be chosen
2. Marketing competence, which has the competence in finding suitable markets, identifying customers and maintaining the survival of the company
3. Financial competence, which has competence in the fields of finance, purchasing, sales, bookkeeping and profit and loss calculation.
4. Human relations competence, namely competence in developing personal relationships, such as the ability to relate and establish partnerships between companies and must know healthy inter-personal relationships.

The concept of performance is defined as: (1) An achievement of results or degree of accomplishment (Keban, 1995), (2) Performance is a record that results from a particular job function or activity during a certain period. (Bernadin & Russel, 1998). Johnson & Kaplan (1987) pioneered the emergence of the concept of business performance and was applied both practically and through research.

The construct of business performance is defined as: (1) The level of achievement or achievement of a company within a certain time period, (2) The results or the level of success or overall success rate of the company during a certain business process period (3) indicators to determine the extent to which business activities are carried out appropriately on goals or objectives (Johnson & Kaplan, 1987; Jauch & Glueck, 1988; Lin & Kuo, 2007).

Performance is said to increase when an increase in sales volume, company assets, and business profitability (Lee & Tsang, 2001). Covin & Slevin (1989) states that: sales growth, gross profit, return on capital / assets, and net profit are indicators of performance measurement of small and medium industries. Several other researchers use indicators that combine financial and non financial performance, namely: sales growth, growth earnings, asset growth, employee growth, and market share (Jauch and Glueck, 1988, Vickery, 1993; Pelham & Wilson, 1996; Ittner & Lacker, 1997; Baker & Sinkula, 1999; Ferdinand, 2000; Croteau & Bergeron, 2001; Shader, K. et al., 2001, Kirca et al, 2005; Suci, 2009) Measurement of business performance is very dependent on how valid these measurements are in accordance with the performance achieved by small and medium industries. Empowerment can be done through several stages, namely: (1) the process of preparing the community to be empowered, whether groups or individuals; (2) formulate what is the problem in the group and find a solution, for example economic problems, how to increase income, it needs joint effort and requires financing.

The Role of Microfinance Institutions (MFIs) related to empowerment: (a) the initiator whose job is to initiate the progress of a member's business; (b) as a facilitator whose task is to formulate the problem as well as the solution for the group, whether the farmer group, small business group or whatever. Problems in community groups are not accompanied by funding, but also problems of financial management, management and marketing management which have been obstacles to the success of SMEs. Therefore there is a third function of the MFIs, namely

(c) as a companion who conducts monitoring or monitoring, guides the process of implementation and provides assessments and provides motivation to members. The involvement of the MFIs in small

businesses must be complete until finally successful and independent, then find another group. Thus, the empowerment paradigm must be attached to MFIs (Rofiah, 2011; Herlinawati, et al, 2017).

The MFIs study in relation to performance improvement was conducted by Taiwo, et al (2010), which explored banks and microfinance institutions having a role in contributing to the performance of SMEs that have received credit schemes through MFIs in Nigeria. (Taiwo, et al, 2010). Next Habibulla (2010) found that MFIs loans can improve the business performance of operators in Bangladesh. Likewise with Wanambisi & Bwisa (2013), that the amount of loans significantly and positively impacts SMEs performance in Kitale Kenya. This is in line with Sayed, G. & Trivedi, P (2014), that the majority of SMEs in Mumbai improved their performance as a result of access to microfinance.

In contrast to Mkazi (2007), that loans from MFIs have less impact on the performance of SMEs for developing countries like Kenya. Likewise with Gathogo, P.K. (2014), that MFIs play a smaller role in empowering the economy of SMEs in Kiambu, MFIs only play a small role in encouraging a more productive workforce. This is because MFIs focus more on their role in channeling funds and do not play an important role in offering training to improve business skills.

Man et al. (2002) regard entrepreneurial competencies as a higher level of characteristics that includes personality traits, skills and knowledge. Entrepreneurial competencies is defined as the total ability of an entrepreneur to perform a job role successfully. Competence is a set of success factors that contribute to achieving high performance and tangible results (Wu, 2009).

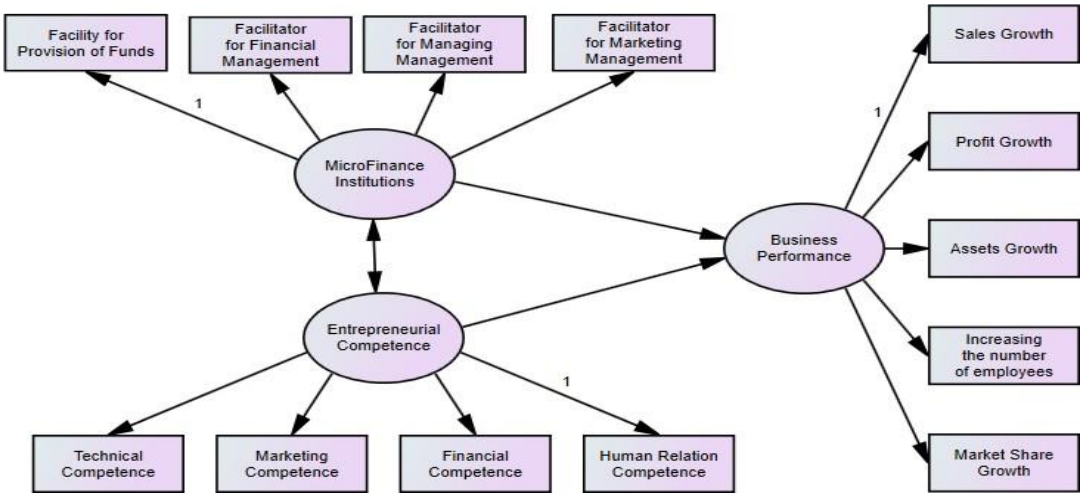
The results of previous studies explain a significant relationship between entrepreneurial competencies and performance (Baum et al., 2001; Karami, 2004; Man & Lau, 2008; Hormiga et al., 2010; Sarwoko et al. 2013; Rosli & Sidek, 2013; Tanoira & Valencia, 2014; Adryan & Putri, 2015; Barazandeh et al., 2015; Dharmayantie & Fauzan, 2017). This is in contrast to research conducted by Lopa & Bose (2014) which shows entrepreneurial competencies does not significantly influence performance.

Other findings show that microfinance institutions have a strong relationship with small business performance. But entrepreneurial competencies plays a partial role in mediating the role of microfinance and small business performance (Rosli & Sidek, 2013).

Methodology

This research framework was built to determine the role of the Microfinance Institutions (MFIs) in empowering SMEs with mediation of entrepreneurial competencies. The role of the MFIs is measured by four indicators, namely: a means of providing funds, a financial management facilitator, a managing management facilitator, and a marketing management facilitator. Empowerment is reflected by business performance measured by five indicators: sales growth, profit growth, asset growth, employee growth, and market share growth. While entrepreneurial competencies is measured by four indicators: technical competency, marketing competency, financial competency, and human relation competency. The proposed model is shown in Figure 1.

Figure 1 Proposed Research Framework



Based on Figure 1 above, the hypotheses developed are:
H1: Microfinance Institutions play a role in Business Performance
H2: Entrepreneurship Competence influences Business Performance.
H3: Entrepreneurship Competence mediates the relationship of Microfinance Institutions with Business Performance.

Quantitative explanatory survey methods are used to test the proposed research hypotheses. To the results of a questionnaire from 150 SMEs in the Greater Bandung area, West Java Indonesia, a descriptive analysis was conducted to measure respondent perceptions about the role of the Microfinance Institutions, Entrepreneurial Competencies, and Business Performance. AMOS 22.0 structural equation modeling (SEM) is used to analyze data and test proposed hypotheses, and evaluate whether entrepreneurial competencies mediates the relationship of Microfinance Institutions with Business Performance.

Data collection in this study using open and closed questionnaires and interviews. Primary data collection is done through a questionnaire filled out by the owner / manager of SMEs. Closed questionnaire to find out respondents' perceptions of the role of MFIs and business performance. While the questionnaire was open to explore the problems of SMEs and MFIs. The questionnaire consisted of two parts: (1) general information about the identity of respondents (2) Respondents' perceptions of the role of MFIs, Entrepreneurial Competencies, and Business Performance as many as 44 questions. The Role of Microfinance Institutions, 21 questions, Entrepreneurial Competencies 8 questions, and Business Performance 5 questions. Measurement using a 1-5 Likert scale. Number 5 means very positive / very high; number 4 height; number 3 is interpreted as lacking; number 2 means low; and the number 1 means very negative / very low.

Questionnaire testing is done by: (1) content validity shows a value of r between 0.728-0.963 with a sign of less than 0.05, including a valid category so that all items can be accepted. (2) Reliability using Cronbach's alpha, resulting in a value greater than 0.70 including a reliable category so that all question items can be used for further analysis.

Table 1
Variables and Questionnaire Constructs

Variable	Symbol	Indicator	Quest
The role of the MFIS			
Facility for Provision of Funds (X1)	X1.1	1. Amount of capital needed	Q1
	X1.2	2. Business Funding Sources	Q2
	X1.3	3. Guarantee	Q3
	X1.4	4. Loan Interest	Q4
	X1.5	5. Access to Finance	Q5
	X1.6	6. Loan Disbursement	Q6
	X1.7	7. Installment Payments	Q7
Facilitator for Financial Management (X2)	X2.1	1. Bookkeeping Training	Q8
	X2.2	2. Financial Report Preparation Training	Q9
	X2.3	3. Tax Training	Q10
	X2.4	3. Financial Management Assistance	Q11
Facilitator for Managing Management (X3)	X3.1	1. Business Plan Training	Q12
	X3.2	2. Information Technology Training	Q13
	X3.3	3. Assistance in managing business licenses	Q14
	X3.4	4. Employee Skills Development Training	Q15
Facilitator for Marketing Management (X4)	X4.1	1. New Customer Search	Q16
	X4.2	2. Business Location Search	Q17
	X4.3	3. Training in Giving Trademarks	Q18
	X4.4	4. Search for Business Partners	Q19
	X4.5	5. Engagement in the Exhibition	Q20
	X4.6	6. Online marketing training	Q21
Entrepreneurial Competencies			
Tchnical Competency (X5)	X5.1	1. New techniques in the production process	Q22
	X5.2	2. Production design according to market demand	Q23
	X5.3	3. High-value products	Q24
Marketing Competency (X6)	X6.1	1. The ability to find new markets	Q25
	X6.2	2. The ability to identify potential customers	Q26
	X6.3	3. The ability to make products according to the wishes and needs of customers	Q27

Table 1
Variables and Questionnaire Constructs

Financial Competency (X7)	X7.1 X7.2 X7.3 X7.4 X7.5 X7.6 X7.7	1. The ability to manage purchases more efficiently 2. Selling ability 3. Bookkeeping ability 4. The ability to make financial statements 5. The ability to access capital 6. The ability to manage finance 7. Financial control accuracy	Q28 Q29 Q30 Q31 Q32 Q33 Q34
Human Relation Competency (X8)	X8.1 X8.2 X8.3 X8.4 X8.5	1. The ability to expand partnerships 2. The ability to establish communication 3. The ability to maintain customer loyalty 4. The ability to be a leader 5. The ability to get external support	Q35 Q36 Q37 Q38 Q39
Business Performance (Y)	Y1 Y2 Y3 Y4 Y5	1. Sales Growth 2. Profit Growth 3. Asset growth 4. Increasing the Number of Employees 5. Market Share Growth	Q40 Q41 Q42 Q43 Q44

Results

Respondent characteristics in this study showed that of the 150 samples, SMEs were dominated by men (77.7%). The largest group of respondents (46%) aged over 40 years. The education level of the majority of respondents was high school (48%). Respondents' most business sectors are fashion (45%), as explained in Table 2.

Table 2 Respondent Characteristic			
Item	Description	Sample	(%)
Gender	Male	116	77.3
	Female	34	22.7
Age	Less than 31 years	6	4.00
	31-35	22	14.7
	36-40	53	35.3
	More than 40 years	69	46.00
Education	Below undergraduate	118	78.7
	Undergraduate	30	20.00
	Postgraduate	2	1.3
Business Fields	Fashion	68	45.30
	Food and beverage industry	40	26.7
	Leather industry and leather goods	10	6.7
	Furniture and wood carvings	9	6.00
	Agriculture and orchid cultivation	2	1.3
	Processing of livestock products	5	3.3
	Thread recycling	6	4.00
	Craft and painting industry	10	6.7

Descriptive analysis in this study was conducted by determining the tendency level of the% frequency score. If the frequency score of 1.2 and 3% is more than 50%, the categorization tends to be low. If the 4% and 5% frequency scores are more than 50%, then the categorization tends to be high. Descriptions of the role of microfinance institutions, entrepreneurial competencies, and business performance are described as Tables 3, 4, and 5.

Table 3 Response of SMEs to MFIS							
No	Dimension	% Frequency of scores					Achievements Criteria
		1	2	3	4	5	
1	Facility for Provision of Funds		41,00		59,00		Tend to be high
2	Facilitator for Financial Management		58,00		42,00		Tend to be low
3	Facilitator for Managing Management		55,00		45,00		Tend to be low
4	Facilitator for Marketing Management		56,00		44,00		Tend to be low
	The Role of MFIS		**52.50**		**47,50**		Tend to be low

Table 3 shows the role of Microfinance Institutions (MFIs), which tends to be low. Of the three dimensions, only one dimension was perceived highly by respondents, namely the role of the MFIs as a means of providing funds.

For business establishment, respondents' capital needs rely on their own source of funds, while to develop their business using loans from MFIs (60%). The reason for choosing funds is because it is more practical, no risk, and there is no burden to pay interest. While funds from MFIs were chosen because they were interested in easy procedures, low interest rates although there are still many MFIs that require collateral, which is 58%. The interest rate is a consideration for SMEs actors in applying for loans, where the majority of respondents (37%) expressed very objection to high interest rates. The role of MFIs as a means of providing funds also relates to access to information, loan disbursement, and installment payments easily perceived by 59% of respondents.

The classic problems of SMEs in financial management, generally the unclear separation between private funds and venture capital. This is due to the low level of education and the low ability of human resources in managing finances. In response to the role of MFIs in facilitating bookkeeping training, preparing Financial Statements, taxation training and assistance in financial management, 58% of respondents stated that they had not played a role.

The role of the MFIs as a management facilitator is to measure the extent to which the MFIs provides facilities in terms of business planning, business development, training in the use of internet / technology, business license management, and employee skills improvement. The majority of respondents (55%) stated that they had never received management training and 45% said they had received training. This condition is due to SMEs themselves object to training because the limited number of employees makes it impossible to be included in training activities.

Likewise, the role of MFIs as marketing management facilitators, including helping to find new customers, finding strategic business locations, creating trademarks, looking for business partners, participating in exhibitions, online marketing training, the majority of respondents (56%) said they had never received training and the rest 44% stated that they had received training This condition indicates that MFIs have not provided assistance to all SMEs, even though marketing aspects are very important in supporting business continuity.

Table 4
Response of SMEs to Entrepreneurial competencies

No	Dimension	% Frequency of scores					Achievements Criteria
		1	2	3	4	5	
1	Technical Competency		55,68		44,32		Tend to be low
2	Marketing Competency		59,15		40,85		Tend to be low
3	Financial Competency		65,33		34,67		Tend to be low
4	Human Relation Competency		61,44		38,56		Tend to be low
	Entrepreneurial Competencies		**60,40**		**39,60**		Tend to be low

Table 4 explains all dimensions of entrepreneurial competencies at a low tendency level with a percentage of 60.40%. This shows that the majority of SMEs businesses are not yet professionally managed. Inadequate competence has an impact on the lack of success of the SMEs business. Percentage score of each dimension can explain that the dimensions that best meet SMEs in entrepreneurial competencies are technical competence where there are 44.32% of respondents with high technical ability and the remaining 55.68% of respondents have low technical ability, which is reflected by new technical mastery indicators in the production process, mastery of production design according to market demand, and the ability to make new products that have high sales value.

The dimensions that contribute the lowest to entrepreneurial competencies are financial

competence where there are 34.67% of respondents with adequate financial competency and 65.33% of respondents with low financial competency, which is reflected by indicators of the ability to manage purchases more efficiently, ability to sell products, ability making financial books and reports, the ability to access capital, the ability to manage finances, and the ability to control the company's finances.

Business performance is one measure of the success of SMEs empowerment that reflects the company's ability to carry out business efficiency and effectiveness.

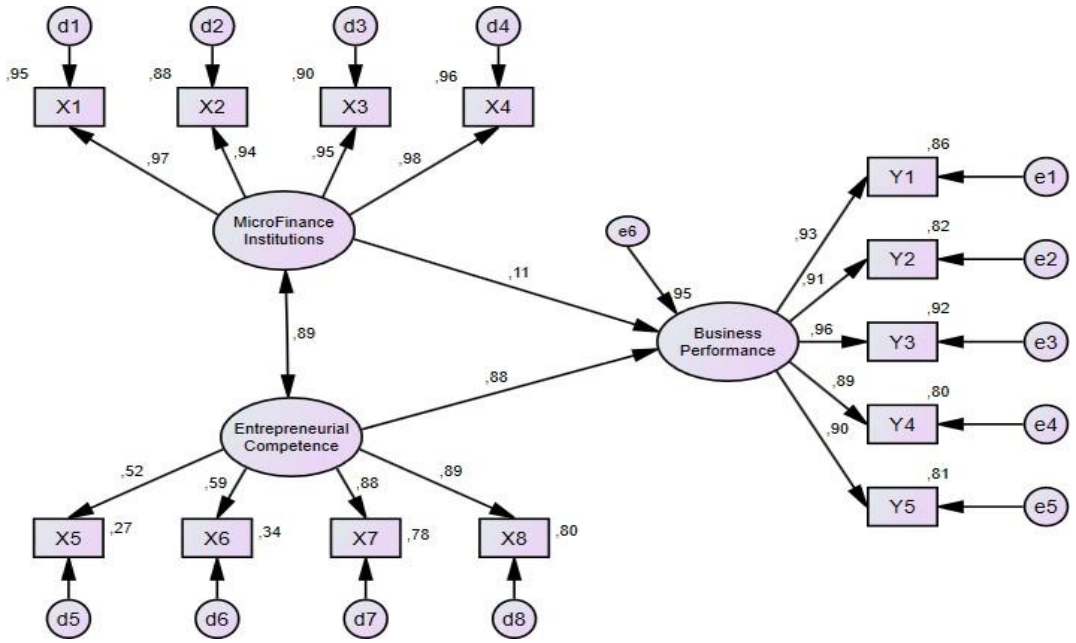
Table 5
Response of SMEs to Business Performance

No	Dimension	% Frequency of scores					Achievements Criteria
		1	2	3	4	5	
1	Sales Growth	37,35			62,65		Tend to be high
2	Profit Growth	48,20			51,80		Tend to be high
3	Asset Growth	42,90			57,10		Tend to be high
4	Increasing the number of employees	73,41			26,59		Tend to be low
5	Market Share Growth	73,70			26,30		Tend to be low
Business Performance		**55,11**			**44,89**		**Tend to be low**

Table 5 explains the SMEs business performance after obtaining financing from MFIs as a whole is still low with a percentage of 68.09%. The percentage score of each dimension can explain that the dimension that best meets SMEs in business performance is sales growth where there is 62.65% or exceeding 50% of respondents with increased profit growth. While the dimensions that contribute the lowest to business performance are the growth in the number of
employees and market share where only 26.59% and 26.30% of respondents experienced an increase in the number of employees and market share. Indicators of market share growth with the lowest achievements must be a concern of SMEs, MFIs and policy makers because the low market share can have an impact on other low indicators.

The results of the test models measuring the role of the MFIs and business performance are shown in Figure 3 which shows the value of the loading factor (λ) for all indicators greater than 0.4. This means that the indicators are valid in forming exogenous and endogenous constructs. The value of construct reliability (CR) must be above 0.7 and variance extracted (VE) must be above 0.5 already fulfilled so that it can be concluded that the role of the MFIs and business performance has good construct validity and reliability.

Figure 3 SEM Measurement Results



Goodness of Fit test results in Table 6 show not all Goodness of Fit measures, but referring to Malhotra (2010), it can be concluded that the overall model is fit, because it meets the following requirements: (1) Use at least one size that is absolute good (for example: GFI, AGFI), the GFI value is greater than the cut-off value ≥ 0.90, which means the model is fit with data; (2) Use at least one measure that is absolute bad (for example: Chi-Square, RMSR, SRMR, RMSEA), RMSEA values close to a cut-off value of 0.08, interpreted model fit with data, (3) Use at least one comparative measures (for example: NFI, NNFI, CFI, TLI, RNI), NFI, CFI, TLI values are greater than the cut-off value ≥ 0.90, which means the model is fit with the data.

Table 6
Goodness of Fit Structural Model Testing

No.	*Goodness of Fit Index*	*Cut-off Value*	Result	Conclusion
1	Chi-Square	Chi-square<Table	161,081>61,057	Bad Fit
2	Significant Probability	≥ 0,05	0,000	Bad Fit
3	RMSEA	≤ 0,08	0,087	Marginal Fit
4	GFI	≥ 0,90	0,907	Good Fit
5	TLI	≥ 0,90	0.913	Good Fit
6	CFI	≥ 0,90	0,937	Good Fit
7	NFI	≥ 0,90	0,926	Good Fit

Evaluation of structural model assumptions is done through outliers and multicollinearity. Testing of multivariate outliers in Table 7 shows the value of Mahalanobis distance (d^2) max $<X^2$, so that in multivariate cases there are no outliers in the data.

Table 7 Data Outliers *Mahalanobis distance (d^2)*		
Max	Min	x2
41,144	9,399	161,081

Evaluation of multicollinearity in Table 8 shows that the Determinant of sample covariance matrix value is greater than zero and the Condition number is smaller than 1000, so it can be concluded that there is no multicollinearity and singularity problem in the analyzed data.

Table 8 **Multicollinearity**	
Determinant of sample covariance matrix	***Condition number***
0,030	316,166

Based on the assumption evaluation test results it is known that in multivariate there are no outliers in the data and the sample data sets empirically still meet the main statistical assumptions, namely there is no multicollinearity problem. Thus the sample data set is still suitable to be used for further analysis.

The results of testing the role of MFIs in empowering SMEs reflected in business performance in Table 9, Standardized Regression Weights (SRW) of 0.113> 0 indicate the high and low of business performance is positively determined by the role of MFIs but with low contribution. The significance value of CR with prob> 0.05 then the null hypothesis is accepted and the alternative hypothesis is accepted.

This means that MFIs have less role in business performance so hypothesis 1 is rejected. The results of testing the effect of entrepreneurial competencies on business performance showed SRW of 0.875> 0, which means that the high and low of business performance is positively determined by entrepreneurial competencies. The significance value of CR with prob <0.05, then the null hypothesis is rejected and the alternative hypothesis is accepted, meaning that entrepreneurial competencies influences business performance so that hypothesis 2 is accepted.

The results of entrepreneurial competencies testing moderate the relationship between the role of the MFIs with business performance showing a high and positive correlation of 0.888> 0, which means that entrepreneurial competencies is able to moderate the relationship between the role of the MFIs with business performance. The significance value of CR with prob <0.05, then the null hypothesis is rejected and the alternative hypothesis is accepted, meaning that entrepreneurial competencies moderates the relationship between the role of the MFIs and business performance so that hypothesis 3 is accepted.

Table 9 **Results of Estimated Structural Model Parameters**							
			Estimate				
			RW	*SRW*	***e***	***C.R***	***P***
Business_ Performance	<---	The Role of MFIS	0,082	0.113	0,076	1,077	0.281
Business_ Performance	<---	Entrepreneurial competencies	0,848	0,875	0,114	7,453	***
			Cov	Corr			
			2,197	0,888	0,294	0,473	***

SRW values in Table 10 explain the existence of the role of MFIs of 1.28% but not significant in empowering SMEs characterized by increased business performance. This is due to the MFIS's more focused role in channeling funds. The effect of entrepreneurial competencies on business performance is 76.60%. Likewise, entrepreneurial competencies is able to moderate the relationship between MFIs operands and business performance with an effect of 78.9%.

Table 10
Partial Influence

			SRW	$_R2$
Business_ Performanc e	<---	The Role of MFIS	0,113	0,0128
Business_ Performance	<---	Entrepreneurial Competencies	0,875	0,766
MicroFinance_Institutio ns	<-->	Entrepreneurial_ Competence	0,888	0,789

Discussion

Research findings show that MFIs play a positive but not significant role in empowering SMEs that are reflected in business performance. The research findings also show that of the five indicators of business performance there are two indicators that tend to be low, namely the number of employees and market share. This can be understood because the products produced by SMEs tend to be monotonous and also low in technology in the production process so it is not surprising that MFIs do not play a role as Mkazi (2007) and Gathogo, P.K. found. (2014) that in developing countries loans from MFIs have less impact on performance improvement. SMEs not only require financing facilities but also training to improve managerial skills so that the systemic weaknesses that have been subject to discussion can be minimized gradually.

The role of MFIs is more focused on funding so that after receiving financing, there is an increase in sales, profits, and assets but not significantly. This finding is in accordance with Taiwo, et al (2010), that MFIs play a role in contributing to performance after obtaining credit. Likewise, Habibulla (2010) found that loans from MFIs could improve business performance by increasing sales, assets and technology. This was confirmed by Sayed, G. & Trivedi, P (2014), the finding of 77% of SMEs increased their performance in terms of sales volume, profits and

physical assets as a result of access to microfinance. Even Wanambisi & Bwisa (2013) suggested that the number of loans provided by MFIs to SMEs be increased so that SMEs grow into medium-sized companies. This is due to the number of loans having relevance to performance.

The results showed that entrepreneurial competencies had a positive effect on business performance. This finding supports Covin & Slevin (1991) that entrepreneurial competencies will be able to increase business success. Man et al. (2002) regard entrepreneurial competencies as a characteristic with a higher level of entrepreneurship in performing work roles for business success. Likewise Wu, et al (2009), that competency is a set of success factors that contribute to high performance outcomes.

This finding is in accordance with Sanchez, J (2012), that entrepreneurial competencies has a direct effect on performance. This finding also supports the research of Sarwoko, et al (2013), that stronger entrepreneurial characteristics will lead to an increase in the competence of SMEs owners, which in turn will have an impact on business performance. Similarly, Shehnaz, et al (2014), that the existence of entrepreneurial competencies guarantees the survival and growth of Small and Medium Enterprises, where entrepreneurial competencies are identified as contributing to better SMEs performance.

Lopa & Bose's (2014) findings that all competencies are needed by manufacturing industry entrepreneurs to improve company performance. Similarly, Dhamayantie & Fauzan (2017) states that entrepreneurial competencies has a positive and significant effect on the performance of SMEs. Even Sajilan, et al (2013), in their research found that very few of the successful SMEs were even on the verge of collapse due to the lack of entrepreneurial competencies that negatively impacted business performance.

Conclusion

This study aims to analyze and provide empirical evidence of the role of the Microfinance Institutions (MFIs) in improving business performance by mediating entrepreneurial competencies. The findings show MFIs play a role in improving business performance but are not significant. Entrepreneurial competencies has a positive and significant effect on business performance. The role of the MFIs becomes greater in business performance by mediating entrepreneurial competencies. The implication of this research is the low entrepreneurial competencies and the less optimization role of MFIs that affect the ability, skills and knowledge of SMEs entrepreneurs in running and developing their businesses, so that the survival rate of SMEs is low. This finding implies that in order to improve business performance, SMEs in conducting their business are always entrepreneurially oriented and strengthening entrepreneurial competencies. The originality of this research lies in the topic of research that has not been done much that is entrepreneurial competencies mediating the relationship of the role of microfinance institutions with business performance.

Limitation

This study has several limitations. This study only uses two variables, namely looking at the role of microfinance institutions and entrepreneurial competence on SMEs business performance and has not included the other variables which may more dominantly influence business performance. The research sample is limited to 150 SMEs in Greater Bandung area West Java Indonesia and only takes 8 samples from 24 business fields. With a wider area and more diverse fields for further research, the research findings can be generalized with better results.

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Batik Marketing Communication Among Millennials

(*Descriptive Study Of Marketing Communication Of Batik Trusmi Cirebon Among Millennials During The Pandemic*)

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Abstract
The challenges faced by BT Batik Trusmi before and during the pandemic were one of the reasons why this research was conducted. The high competition among batik entrepreneurs in attracting consumers to increase sales. And one way is to implement and determine the right marketing strategy with segmentation. This study aims to determine the marketing communication of BT Batik Trusmi, by knowing more about marketing planning activities, organizing stages, implementation stages to evaluation. The method used in this research is a descriptive study where the researcher wants to describe the marketing activities of BT Batik Trusmi with observation and interview research techniques. Marketing activities generally focus on products, pricing, and promotion methods which in this case is known as the marketing mix. The research was conducted based on a change in the target market, which originally offered experiences related to the history of Cirebon batik and the Cirebon batik making process to focus on sales with a millennial target.
Keywords : Marketing Communication, Batik Trusmi, Pandemic

Preface

To market, a product requires planned and systematic marketing planning and communication. Marketing communication is one form of way to facilitate product sales activities, one of which is based on the marketing mix. In the marketing mix, steps are determined, namely the determination of market segmentation, targeting, and positioning which are used as the basis for marketing planning (Hermawan, 2012, p. 31). When talking about segmentation, the main thing that can be done is to determine the target market. In determining the target market, it is also determined which targets have valuable customers and which ones are less or less valuable customers. This is to determine the appropriate target for the product to be marketed. The product is also a vital object that is no less important than marketing activities because the product affects the success of a company to bring in profits or profits. In this case, it is important to determine a product in sales, a potential product is expected to have value for the needs and desires of the audience. One product that utilizes the marketing communication process in product sales activities is BT Batik Trusmi. At first BT Batik Trusmi was a batik area in the Cirebon City area which was inherited by ancestors in the City of Cirebon, but over time and the potential for public interest in BT Batik Trusmi products then expanded to sales and marketing on social media. One of the social media used by BT Batik Trusmi is Instagram, TikTok, Facebook, Youtube, and Tokopedia, and Shoppe Marketplaces. In carrying out marketing communication activities, careful planning and effective use of media are needed. BT Batik Trusmi optimizes marketing communication activities on social media during the pandemic, with the target market being millennials. This is done in an effort to keep sales activities running during the pandemic to maintain the company. In this study, the researchers tried to get an overview of the entire marketing communication process carried out by BT Batik Trusmi in the hope that it can be a reference material for other business actors who are trying to survive during the pandemic.

Methodology

In this research, the researcher uses a descriptive methodology with a qualitative approach through observation and interviews. This research uses marketing mix theory, where the marketing mix theory has four components for marketing activities, namely; (1) product, (2) price, (3) place, (4) promotion. This study also seeks to describe the state of the subject or object based on the facts that appear. (Herma wan, 2012, p. 33).

Literature Review

In a marketing study not only one study of science because marketing is not pure science. Economics, psychology, sociology, communication are interrelated in the marketing process. The basics of marketing include 7 (seven) points (Hermawan, 2012, p. 26):

1. Marketing and economics
2. Segmentation
3. Marketing mix
4. Marketing strategy
5. Marketing object
6. Distribution activities
7. Promotional activities

During the pandemic, marketing activities are needed to continue to be able to carry out sales activities and be able to compete with other products. This is done because to keep the company running, and in marketing activities that can determine market segmentation, product positioning, promotions, strategies, and others. This pandemic period also requires companies to adapt to a slightly different marketing process than usual. There are limited rules related to the community's space for movement, and the rules of each region regarding permits to open businesses. The company creates new opportunities and new segmentation by utilizing digital media. Marketing communications on digital media, especially social media, have different models for example audiences and culture between traditional and digital has several differences (Nasrullah, 2021, p. 33). First, the audience in the digital world is an active part in the use of media. Audiences on social media have a variety of media choices that can be accessed if it is likened to controlling a channel on television by using a remote control, audiences in the digital world often switch media according to the satisfaction they get. If it is reviewed, social media users have access to several social media and are not limited in creating their social media accounts. One user may have several accounts such as Facebook, Instagram, YouTube, TikTok, this is to fulfill self-satisfaction. Each social media has a character, for example, Instagram has a feature of images/photos and short videos so that its users can take advantage of the function of sharing photos and short videos on the media. Instagram users also usually use Instagram to get information related to things they like such as product reviews, stories about everyday life, and others. Meanwhile, YouTube utilizes both short and long video features with longer duration quality. The audience on social media can make their choices according to their individual or personal satisfaction.

Both audiences in the digital world have the discretion to determine the relationship between the need for satisfaction and the choice of media. As explained above, the audience in social media has a variety of choices. Unlike traditional media with limited options, social media can choose and create accounts at will. However, because of these characteristics, audiences can also switch from one social media to another. The three basic assumptions of media and audiences are not in a vacuum, the media competes with the sources of needs and satisfaction of social media users who are also the needs of the audience. At this point, the competition on social media is more open where the media that can best adapt to the character of social media users or the needs of social media users can be met. Fourth, every audience has full awareness in choosing social media/digital media. Social media users are usually the full choice of their wishes because in making social media there are no restrictions on age and rules. The five relations of audiences to media or media content have different impacts in value among the audiences themselves. The impact of using social media is not all the same but varies according to the user's point of view. For example, a food review can have a positive impact on audience A so that audience A wants to eat the food. Meanwhile, audience B may have a different or negative impact so that audience B doesn't like the food. With the current development of digitalization, companies need to understand the digital culture in the era of social media, several points that need to be understood are (Nasrullah, 2021, p. 39):

1. Understand that social media is having a moment, not having something (stuff)
2. Maintain strict social ties, but are flexible and measurable.
3. Share ideas.
4. Always learn to achieve success.

5. Have strong rules of the game or ethics.
6. Accept flaws.
7. Accept all conflicts or crises Part of life.
8. Natural Receiving abundance is not something artificial.

According to Rully social media has a different character from traditional media or mass media, some of the differentiators on social media are as follows:

1. Reach shows that the reach, both traditional media, and social media, can reach a wide and global audience. However, traditional media has a satisfied character in terms of organization, production, and dissemination, while social media is more decentralized in terms of production and content originating and depending on the audience itself.
2. Accessibility that traditional media to access depends on the regulations of the place where the media organization is located. In contrast to social media which frees anyone to access, it tends not to require certain financing, and also without restrictions according to certain country or location regulations.
3. The use (usability) that production in traditional media requires special skills and training while on social media the audience only requires digital experience and without special training can produce (content) information on social media.
4. Immediacy in traditional media often has delays like its publication, not to mention the subject of the content that is prohibited according to certain regional regulations. On social media, the immediacy factor depends on the participants or the netizens themselves.
5. Permanence that once produced, traditional media products tend not to be changed. Social media has a distinction that published content can be revised or edited as soon as possible.

Social media interaction is one of the new characteristics of the internet compared to other mass media. Not just coverage area, mass production, mass distribution, to mere effects (Straubhaar & LaRose, 2002), the interaction between content creators and content recipients is not limited by geographical boundaries and the interaction is not limited and can be done directly or indirectly.

In the context of the comparison of new media with old media, Holmes (2005) even emphasized that compared to the first media era, in the second media era with the presence of the internet and also currently social media one-way communication patterns have changed to two-way communication and are more interactive. Also, each audience is considered to have its variety and identity as well as its characteristics, in contrast to the first media era where the audience was considered a uniform mass.

Table 1 Differences between the first and second media

The first media era (Broadcast)	Second media era (Interactivity)
Centralized (from one source to many audiences)	Scattered (from many sources to many audiences)
Communication is one-way	Communication is reciprocal or two-way
Open source or media opportunities to master	Closed media control and free control over sources
Media is an instrument that perpetuates strata and inequalities of social class	Media facilitates every audience (citizens)
The audience is fragmented and perceived as mass	The audience can be seen according to the character and without leaving the diversity

	of their respective identities
Media is considered to be able or as a tool to influence awareness	Media involves the experience of audiences both in space and time

Discussion

BT Batik Trusmi was founded in March 2011 by a husband and wife named Selly and Ibnu. At first BT Batik Trusmi was the central area of batik in Cirebon City, where this area had been made special locations by the ancestors in Cirebon City to be used as business centers. In each of these centers, there is one of them, there is a batik center or batik area, a traditional Cirebon food center, and many more locations that have been neatly determined by the previous ancestors.

History of BT Batik Trusmi the movers or owners themselves, Selly and Ibn were originally shroud sellers. This shroud is a cloth that is often used by Sundanese residents where the basic cloth to wrap the corpse is batik cloth. Ibnu's parents are some of the elders who supply batik materials and batik equipment, starting from canting, cloth, hurdles, candles, and others. Initially Selly and Ibn sold batik from house to house with batik purchased from the Tanah Abang market and peddled back to neighbours in the Cirebon area to introduce batik to the people of Cirebon City.

BT Batik Trusmi, which at that time was the name of the batik area in its entrepreneurship journey, turned out to have a plan to make the batik area into a shopping center by selling Cirebon batik with the BT Batik Trusmi brand. Over time, there were a lot of debates and doubts about the BT Batik Trusmi brand. Initially, Batik Trusmi was founded not primarily to sell batik but to sell the experience of how to make batik directly which is called a batik studio. This region relies on tourists and immigrants to enjoy the process of batik. Gradually the idea sparked by the owner of BT Batik Trusmi began to find a bright spot and finally, BT Batik Trusmi created BT Batik Trusmi as a typical Cirebon batik brand and until now BT Batik Trusmi is still operating selling its trademark batik, namely the Mega Mendung pattern with the brand name BT Batik. Trusmi.

After the establishment of BT Batik Trusmi, there are positive things from changing the central batik area into a batik sales area, one of which is getting support from the government in the form of the development of the BT Batik Trusmi area which is supported by the government in its construction such as the Mega Mendung Substation. This is separate support for BT Batik Trusmi and the BT Batik Trusmi area itself. This area eventually became one of the areas that must be visited by tourists when visiting the city of Cirebon, and finally, Trusmi batik can be developed properly and is starting to develop until now.

In 2020, during the pandemic, BT Batik Trusmi was one of the affected in the entrepreneurial field, apart from no tourists visiting to enjoy the batik experience, sales also declined. For this reason, BT Batik Trusmi currently focuses on online sales by determining more accessible segmentation targets. Batik began to be crowded and booming when it was claimed by Malaysia around 2017, since then Indonesia submitted a claim to UNESCO and UNESCO acknowledged that batik belongs to Indonesia, not Malaysia.

So for the time being, from 2021 to 2022 in the future, BT Batik Trusmi is still selling products that have not returned to the batik studio area due to the pandemic. Before the pandemic, BT Batik Trusmi's target market was from outside Cirebon and Kuningan, what we targeted were tourists from big cities like Jakarta and Bandung from big cities. Because of this change, after this pandemic, we have changed our sales direction to focus on millennials. Indeed, it was a bit difficult at first because in marketing our products we had to package these products with attractive packaging, starting from introducing the philosophy of batik, and highlighting the interesting things about batik.

According to Tjiptono in the book Strategic Marketing in determining the market there are 6 steps (Tjiptono & Chandra, 2012, p. 115):

a) Determine the relevant market (relevant market)
b) Analyze selective demand in relevant markets
c) Define market segment

d) Assessing the competition
e) Identify potential target markets

The market analysis activities mentioned above in the points above are also carried out by the marketing and marketing team management of BT Batik Trusmi. The thing that distinguishes BT Trusmi Batik from other batiks, such as Pekalongan or solo batik, usually this batik is darker in color, at a glance, there are many universal patterns such as the leaf, fence, and flower patterns. While Cirebon batik or BT Batik Trusmi is brighter in color selection and there is a characteristic of this Mega Mendung pattern which is the hallmark and advantage of BT Batik Trusmi for now. There are seven batiks owned by BT Batik Trusmi but at this time the mega cloudiness is still the hallmark of the first BT Batik Trusmi issued. Meanwhile, the other six batik patterns will be launched later after BT Batik Trusmi has found the right time and moment. BT Batik Trusmi's market segmentation both before the pandemic and after the pandemic, which was previously tourists and mostly adult women, after this pandemic was still dominated by women and adults. However, it is undeniable that men are also included in the BT Batik Trusmi market, only that during this pandemic period they will focus more on expanding their market to millennials with segmentation on social media. According to Cavusgil, S. Tamer, Shaoming Zou, and G.M. Naidu (1994) adaptation has three aspects, namely Positioning, Packaging or Labeling, and Promotion. BT Batik Trusmi already has a characteristic in labeling the mega cloudy batik motif which is sufficient to represent the millennial need for trendy batik. Because of this, development when dealing with the Covid-19 pandemic focuses on positioning and promotions that are different from previous conditions. The pandemic has pushed sales from all market segments to switch to digital, where according to the Statista report, currently, the most social media users in Indonesia in 2020 are aged 25-34 years. In detail, male and female users were 20.6% and 14.8%, respectively. The next position is users aged 18-24 years. In detail, male and female users are 16.1% and 14.2%, respectively. So the positioning of BT Batik Trusmi who entered sales in digital media changed the initial positioning where BT Batik Trusmi has an adult segmentation to millennials.

When the pandemic is experiencing penetration to millennials today, it is possible that what millennials want is affordable prices and simple batik patterns in terms of model colors. So that BT Batik Trusmi can create batik that can be used at any time, both informal and casual conditions for everyday use. One of them is BT Batik Trusmi making batik shirts, batik pants, or batik negligees which can be used at any moment so that BT Batik Trusmi still takes every moment of celebration and also in everyday life. Then the promotion system carried out also shifted due to the large difference in the media accessed by the adult and millennial segmentation. The current plan for selling BT Batik Trusmi products is segmenting the millennial market by projecting the market on social media. BT Batik Trusmi's marketing team found that the right form of promotional activity for the millennial segmentation is an understanding of their needs in moments or times of celebration, be it country, religion, or the surrounding environment. The form of activities and stages are carried out by the marketing team to compile or create an in-line marketing calendar in the seasoning which in one season must focus on making products that match the moment. For example, during Eid al-Fitr, the team will focus on the characteristics of the Eid celebration with products such as robes, Moslem clothes, and uniforms for families Eid. If the season is a holiday, BT Batik Trusmi makes a simpler product with rayon material that can be used during holidays because it has a cold and soft texture. In Cirebon BT Batik Trusmi is a pioneer in utilizing the existing seasons to adapt the models that will be released. This can be a reference for other batik UMKM activists in carrying out special promotions for the millennial segmentation where each particular season has the characteristics of tailored clothing models.

Aesthetics is the study of everything related to beauty. The three aesthetic elements used in the art include form or appearance, weight or content, and appearance or presentation (Djelantik, 2004). The millennial segmentation has a fairly narrow perspective in assessing an item he wants, especially for items that can only be seen visually through digital media. Therefore, the concept of seasons and clothing models that match the seasons is something that will also affect the interest of the millennial segmentation. The marketing team will create an activity timeline calendar, the products here will be sorted into suitable events, then enter the campaign and publishing activities to be determined, chosen and determine for and be promoted by the artist, or influencer, who has been targeted and the promotional packaging is also the team marketing that determines, both in terms of content and what kind of content writer.

So for seasoning is divided into 3 categories:

1. High season/Holidays for example Ied and long holidays in December
2. Middle seasons such as August, Eid al-Adha, Chinese New Year, etc
3. Low Season is usually divided into mock-up segments, for example: what month will graduation be in what month, the date people get married in what month, the marketing team will take a suitable month according to the needs of the community, for example, there is a February season because there are beautiful dates on 2-2 -2022 the marketing team will take this event to be included in the activity calendar. Before the month of Shawwal, before Eid al-Adha, after Eid, many products are also prepared for events, the marketing team will take the event to determine the products to be offered.

After that, it will match what goes into the publish activity which matches the influencer, and the moment event above will also always be used.

The media channels used by BT Batik Trusmi to publish are for official:

1. Instagram
2. Tiktok
3. Website
4. Youtube

Shopping Marketplace there are:

1. Tokopedia
2. Shoppe

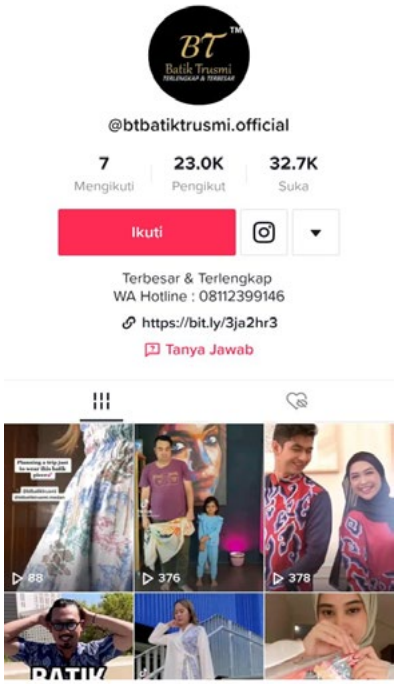
In the concept of comparison with traditional (mass) media, Andews and Shimp (2018) provide several differentiators of social media as follows (Nasrullah, 2021, p. 15):

1. Achievement or (reach)
   BT Batik Trusmi utilizes social media to reach a wider market where BT Batik Trusmi initially only marketed products traditionally in the Cirebon City area, but with the use of social media, its reach has become wider.
2. Accessibility
   Due to the character of social media that can be accessed by many types of users, from children to adults and parents, BT Batik Trusmi adds market segmentation, starting from adult segmentation to parents in traditional marketing with millennial segmentation in marketing on social media.
3. Usability
   Even though there is no special social media training at BT Batik Trusmi, with a lot of data that can be accessed such as age of social media users, user gender, BT Batik Trusmi can find out patterns of market segments that use social media from Instagram, youtube, tiktok and websites.
4. Immediacy
   With the use of social media in marketing communications by BT Batik Trusmi, BT Batik Trusmi demands that BT Batik Trusmi always bring up innovations in batik patterns or batik materials used.
5. Travel (permanence)
   Due to the non-permanent nature of social media, BT Batik Trusmi has the flexibility to vary the flow of marketing communications from one social media to another.

Instagram become one of the official social media of BT Batik Trusmi, where Instagram includes the target market that BT Tatik Trusmi wants to target. To reach millennials as the target market, BT Batik Trusmi is still on Instagram social media. Instagram is currently used by various groups other than parents and adults to teenagers who have used Instagram social media. From Instagram, consumers can directly click on the link to process transactions, both transactions through the website or marketplace. So for the official/home of BT Batik Trusmi, Instagram is very influential and facilitates the transaction process because it also includes the target of BT Batik Trusmi.

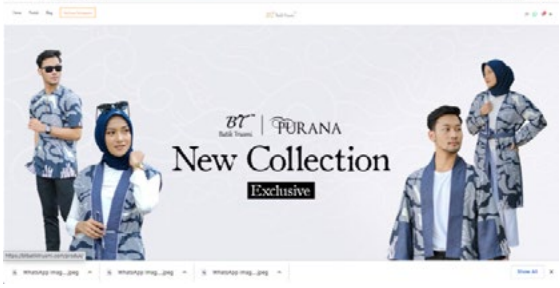
Picture 1 BT Batik Trusmi Instagram

In picture one above, it can be seen that the Mega Mendung batik patterns is the flagship patterns of BT Batik Trusmi with a characteristic bright color. In addition, the segmentation that can be seen in the picture above, namely, BT Batik Trusmi determines the segmentation from children to adults. Not only Instagram but also BT Batik Trusmi use Tiktok as the second most influential medium, to reach their target market. Where TikTok users are currently controlled by the millennial generation. Tiktok spreads very quickly and can be immediately reached by many viewers. For this reason, Tiktok is also used as a marketing communication tool for BT Batik Trusmi to introduce batik. Usually, on this TikTok, viewers can immediately see the official Instagram address of BT Batik Trusmi and some make transactions after seeing this TikTok show.



Picture 2 BT Batik Trusmi TikTok

The picture above is a social media account for BT Batik Trusmi's TikTok, the content in the account is a collection of short videos that explain the advantages of BT Batik Trusmi besides that there are also reviews from artists and influencers as well as related tricks in the use of batik.
The website is always included if there is a seasoning event from the three existing categories. While the media that is currently the most influential for BT Batik Trusmi's house itself is still held by Instagram because currently Instagram users are also used to sell products and services. To find a product, most millennials are usually searched through Instagram to see product profiles and product prices.



Picture 3 BT Batik Trusmi Website

In the picture above is the website of BT Batik Trusmi, on this website, there is a complete collection of BT Batik Trusmi products. Starting from men's clothing, women's clothing, couple, batik cloth, premium collection, batik masks, and others. To determine the content creator or influencer of BT Batik Trusmi, does not determine personality, but rather the existing budget, and a link from the owner of BT Batik Trusmi. In evaluating BT Batik Trusmi, it is carried out daily and there is also weekly where each BT Batik Trusmi employee already has their respective responsibilities in this report. Every activity carried out by the BT Batik Trusmi marketing team there is always a final evaluation to measure the success of planning implementation to millennials in the social media market segmentation. The challenge for now that BT Batik Trusmi is experiencing is the production constraints. When orders come in in sufficient quantities, products must be prepared and marketing communication activities must also continue to run simultaneously. However, BT Batik Trusmi can overcome this problem because BT Batik Trusmi strives

for marketing and sales activities of this product to run smoothly and there are no significant obstacles. The second obstacle for BT Batik Trusmi is that in using this social media, BT Batik Trusmi is required to package attractive products, starting from products, marketing content, selecting artists/influencers, and sometimes things that are a little "weird" are needed to increase traffic. In measuring sales traffic, BT Batik Trusmi usually supervises the programs that have been prepared by the marketing team (seasoning program) of the program, what the traffic looks like. For that, every BT Batik Trusmi program never misses this moment. How to do the evaluation BT Batik Trusmi is divided into a marketing team and a sales team, each team reports the results of their activities every day and there are also weekly evaluation results. The marketing team of course carries out the program activities described above, while the sales team focuses more on sales targets.

Conclusion

The emergence of the Covid-19 pandemic prompted BT Batik Trusmi to change its target market from selling "experience" in batik to selling through digital platforms. In addition to having strengths and characteristics in the mega cloudy motif which is visually appropriate for the millennial market, the pandemic conditions provide a way for BT Batik Trusmi to focus more on online sales because millennial users in the online market are quite large. BT Batik Trusmi also adapts to seasonal conditions in Indonesia which raises interest in certain seasons from the community. BT Batik Trusmi divides the existing 3 seasons, namely: High Season, middle season, and low season. This affects the clothing model that will appear. With the unique combination of motifs, as well as the presence of BT Batik Trusmi in meeting people's needs for clothing models in certain seasons, BT Batik Trusmi has grown rapidly in online sales during this Pandemic.

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The Effect Of Corporate Reputation And Customer Trust On The Purchase Interest Of Prospective Postgraduate Students At Xyz University

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Abstract
Currently, the reputation of higher education is very potential for a university because it will become a significant capital in developing its business in the field of education. Several factors such as services, facilities, and image or reputation that can show the quality of a university and will affect its choice in continuing education to a higher level. From the problems put forward in this study, the researcher intends to conduct research entitled "The Effect of *Corporate Reputation* and *Customer Trust* on the Purchase Interest of Prospective Graduate Students at XYZ University". This study aims to investigate the effect of *Corporate Reputation* and *Customer Trust* on students' purchase interest in choosing a master's degree program. The study used descriptive and verification analysis methods with a sample of 115 respondents. Sampling used a non-probability sampling technique. Statistical Analysis Data used F-Test and T-Test using the Multiple Linear Regression method with a significance level of 10%. The results of partial research show that the *Corporate Reputation* variable has no effect on Purchase interest and *Customer Trust* has an effect, while simultaneously the two variables affect Purchase interest. Research shows that the contribution of *Customer Trust* is greater than *Corporate Reputation*.
Keywords: Corporate Reputation, Customer Trust, Purchase interest

Introduction

Currently, Higher Education is a new business with great potential, as is the reputation of higher education. The importance of the reputation of a university in the field of education is the main capital in developing its business because a good reputation will reflect the quality of the university. Developing a university is not easy; there are many competitors from various other universities in Indonesia. Several factors can influence the decision of prospective students in determining their studies, such as services, facilities to be obtained, as well as the image or reputation of a university. According to (Kertajaya, 2000) the development of Information Technology causes an *informationalized* consumer, namely a consumer who has many choices.

The existence of this higher education institution is very dependent on the interest of prospective students in registering themselves as a consumer. As we know, competition in education is increasing day by day; for example, currently in West Java, there are 91 academies, 48 polytechnics, 365 high schools, 27 institutes, 65 universities, and 4 community academies (Indonesian Higher Education Statistics, 2019). According to (Wang et al., 2014; Park et al., 2014), A Unique Reputation is impossible to copy. Reputation is significant in the success of the company. Reputation can even be linked to consumer satisfaction and product quality. According to (Alessandri et al., 2006), Universities should be more competitive in the Education Market by attracting the best students and providing better job opportunities for all admitted students. (Finch et al., 2013) also argued that every university must be able to create an advantage to attract the best students to work in the best companies.

Thus, in this study, the problem is the decline in prospective students enrolled at XYZ University, which is visible in the graphic data on the number of Postgraduate students at XYZ University as follows:

Figure 1.1 Number of Students Chart

Currently, as we can see, the existence of a good reputation is very influential in strengthening the position of universities in facing various existing competitors. According to MacNamara (2006), he argued that a profit-oriented and non-profit organization must have a good reputation. Likewise, Kamaludin (2010) stated that building a reputation is not the same as restoring destroyed buildings. Various factors such as trust in the public are very inherent in it because if a company's reputation is terrible in the eyes of consumers, the inherent trust will be released quickly and to rebuild it takes quite a long time.

According to (Heath & Vasquez, 2001), the existing reputation of a company is a vital asset that will not be seen. When managed appropriately, reputation can increase an organization's ability to sell its products and services, attract investors, hire talented workers, and anticipate external influences. In addition, a good reputation will also bring many benefits and advantages and vice versa; a lousy reputation will bring down an organization.

According to Barnes in 2003, he argued that trust is a factor that may get the most attention in the literature that describes the relationship between personal and customer relationships. In addition, another opinion is from McKnight et al. (2014); he stated that trust is based on aspects such as the perception of reputation, the tendency to trust others, or the existence of structural guarantees such as testimonials.

Purchase interest of prospective students in registering to continue their education at a particular University is influenced by various factors, and based on the related literature, the author can see that *Corporate Reputation* and *Customer Trust* also influence Purchase interest.

Based on the description of the problem and background above, the researcher intended to work on a study titled "The Effect of *Corporate Reputation* and *Customer Trust* on the Purchase Interest of Prospective Graduate Students at XYZ University."

Literature Review

1. Marketing Management

According to Sofjan Assauri (2013:12) he argued that Marketing Management is an activity of controlling, planning, analyzing, and implementing programs that have been created to build, shape and maintain profits generated from various transactions through the target market as a basis for achieve long-term goals for an Organization or Company.

Kotler & Armstrong (2014:30) argued that marketing management is a science and art in selecting target markets by creating mutually beneficial relationships. In short, marketing management is a way to manage customer demand. According to Kotler & Keller (2016: 27), Marketing management is the science and art used in determining target markets and retaining, acquiring, and increasing the number of customers by creating, delivering and communicating superior customer value. The marketing management function consists of consumer research, developing communication, promotion, distribution, and promotion as well as pricing and service delivery. These activities are carried out with the aim of serving, knowing, fulfilling until the needs of consumers are satisfied. Here are FThe marketing functions proposed by Sudaryono (2016: 50):

a. Functions of Exchange

In this function, the buyer can buy a product from the manufacturer by exchanging it (barter) so that individuals can use it themselves or sell it. That way Exchange becomes one of the ways that can be used to exchange products.

b. Function Of Physical Distribution

Physical distribution will be channeled through the Transport and Storage of the Product. Then the product is brought closer to consumers who need it through various transportations, both land, sea and air. Furthermore, the product will be stored so that it does not run out when needed. This is done as an effort to maintain product supply.

c. The function of the intermediary

Product delivery can be carried out from producers to consumers through the existence of marketing intermediaries, distribution activities, physical exchanges, can be connected. The Intermediary function consists of various activities such as risk use, financing, disbursed information as well as standardization and clarification of products.

2. Purchase Interest (Y)

Kotler and Armstrong (2015) argued that buying interest is a sense of desire that arises in consumers after they receive various stimuli from a product and others so that the desire to get it arises. The existence of buying interest can create a desire or motivation continuously so that it will be embedded in the subconscious which then becomes a stronger desire and becomes a need that must be fulfilled. Thus, the higher a person's desire to master the product, the higher the motivation, then someone's desire to try to get it also has a great opportunity and vice versa.

Repurchase interest is an interest from customers so that in the future they will repurchase the product, which is often purchased with previous experiences. Meanwhile, according to (Phuong et al 2018:81) he argued that in a journal (Saidani et al., 2019:427) Buy back/return interest is one part of the motivational level of consumers so that with their buying behavior they can repeat the behavior of consumers of the same product. According to Ferdinand (2006), purchase interest is a consumer self-statement that reflects the plan to purchase several products with a particular brand. According to Simamora (2011), interest is something related to a person's attitude and personalization; a consumer must desire an object and carry out a series of activities to get what he wants.

Setiadi (2015) stated that if the level of trust of a consumer is lower towards a service or product, the lower the buying interest felt by the consumer himself. The form of consumer buying interest is seen from the attitude of consumers to a brand so that there will be a desire to buy from consumers. Another opinion, namely Hasan (in Yunisya, 2017) argued that he said that essentially, repurchase interest is a behavior that is owned by someone who is influenced by past behavior (experience of products consumed) so that in the future it can affect interest repurchase the product. The existence of repurchase interest with a higher level will show that the level of trust and consumer satisfaction is high.

Meanwhile, according to Ali Hasan (2018:131) Repeated Purchase Interest is the result of identification obtained through a dimension, namely from:

1. Transactional Interest
2. Referral Interests.
3. Preferential Interest
4. Explorative Interests

3. *Corporate Reputation* (X1)

According to Sangadji (2013; 323) a brand is a symbol or name that will describe that a product can be distinguished from other products. so that the product will be more easily recognized by consumers when they make a purchase of the product. Meanwhile, brand image according to Sangadji (2013: 327) is as an association that is present that consumers think of when remembering one of the brands in question. The product image will be present in the mind even the image if we associate it with the brand. Another opinion, namely Kotler and Keller (2016: 330) said that brand image can show the nature or factors that exist in one service or product, to a way they are when they are determined to meet the social or psychological needs of customers. Meanwhile, Tjiptono (2016:105) that Brand Image or commonly known as Brand Image is a description that contains various factors and consumer confidence in a particular brand, while association is a tool that exists in the brand with a high level of strength.

According to Kotler and Keller (2016: 263-264) he argues that Brand Image is a consumer perception that adheres to beliefs and perceptions that are in accordance with previous experiences so that they will then leave an impression because they are recorded in their memories. So with that.

According to some theories *brand image* the author takes the dimensions according to Kotler & Keller (2016: 97) as follows:

1. Brand Identity (brand identity)

Brand identity closely related to the physical identity of the brand so that consumers will more easily be able to remember it and distinguish it from other brands or products, for example it can be seen from the color, logo, packaging location, slogan and corporate identity.

2. Brand Personality

Brand personality Brand Personality is a special personality owned by one brand so that a certain personality like consumers can easily distinguish them even though they are in the same category, Brand Personality is a character, rigid, authoritative, assertive, compassionate, social, or dynamic, creative, independent, and so on.

3. Brand Association (brand association)

Brand association it is appropriate to be associated with the brand so that the unique offering will emerge, which will then occur consistently with repeated activity.

4. Brand Attitude & Behavior

*Brand attitude and behavior*is the result offered from the attitude or behavior offered by a brand. . including appropriate and unethical ways to communicate, so that poor service can be very influential and vice versa. Thus, it is necessary to have consistent behavior and attitudes between reality and promises to provide good service and concern for the community and the

environment at large for a brand so that it will form a perception. So brand attitude & behavior consists of behavior and communication attitudes, attributes and activities related to consumers, including brand owners and their employees.

5. Brand Benefit & Competence

*Brand benefits and competence*a set of values and advantages in particular a brand that it offers to consumers which is done in a way that the consumer will experience various benefits because the needs, desires, obsessions and dreams have been realized from what has been offered. . The benefits and values mentioned here have emotional, social functional, and symbolic properties. The detergent brand has the benefit of cleaning clothes (finctional hengiu values), this causes the user to become more confident when using the product (emotional benefit values), a symbol or lifestyle that reflects a clean modern society (symbolic benefit values) and provides various inspirations for the environment (social benefit values). Various advantages.

Walsh et al (2009) said that the company's reputation is the result of an evaluation of the entire company during direct contact, then the consumer, when viewed from his point of view, is one of the stakeholders, in the company's product services in which there are various interaction activities and communication with the company. the company.

According to Urip (2014:11) in his book stated that a reflection of a good company's reputation includes good/bad perceptions of stakeholders so that they can interact with companies and their influence. Stakeholders must maintain an assessment of these perceptions, both in terms of culture, actions, so that through the available information they can cooperate with the company.

Khan, Majid, Yasir, Arshad (2013) said that a company's reputation can show the overall value that will show a business organization both positively and negatively

4. *Customer Trust* (X2)

According to Mayer (1995), *Customer Trust* is a person's desire to be sensitive to the actions of others based on the expectation that others will take specific actions on people who trust them without depending on their ability to control and supervise them. Consumer trust is a sense of confidence possessed by a consumer so that they state that anyone has quality that can be trusted, besides those who are trusted must also fulfill both obligations and expectations (Nurrahmanto, 2017: 32)

Gefen and Pavlou (2004) argued that *trust* is an assessment relationship between one person and another in carrying out certain transactions based on people's expectations of trust in a sphere of uncertainty.

Firdayanti (2012) argued that a consumer's trust is part of the perception with various consumer points of view including the ability of the seller based on experience to achieve expectations and satisfaction from consumers.

Diza, Moniharapon & Ogi (2016) describe trust as a foundation in business. Trust is a feeling and awareness that consumers have so that they can trust certain products and then use their service providers to be one of the tools in building long-term relationships.

McKnight & Chervany (in Anwar 2016:156) there are several components of trust, which consist of:

1. Integrity.
2. *Benvolenc (Attention)*
3. *Competency*
4. *Predictability*

In the journal researched by (Rosdiana et al., 2019:321) it is stated that a trust consists of various consumer knowledge which includes conclusions that have been agreed by consumers on an object attribute, along with its benefits so that it can show consumer perceptions. While the definition of trust presented according to Sangadji and Sopiah

(2013:201) in the journal (Ardianto, Nuriska, & Nirawati, 2020:66) Trust is the overall knowledge possessed by customers, and along with all perceptions that can be concluded by customers both regarding objects, attributes, and benefits. Then according to another opinion expressed by Supriyono (2010) he explained that Trust is a trust that comes from one party to another so that they carry out transactions on their belief that the party entrusted with the trust will fulfill all their obligations.

Research Methods

Sugiono (2017) argued that the research method is a scientific way to obtain data with specific goals and uses. In this study used a descriptive and verification method through a quantitative approach. So, in conducting this research, a Survey Method with a Quantitative Approach will be used. Research that has been carried out by research uses explanatory technical types that describe Hypothesis Testing and Causality Relationships and Research with a Quantitative Approach (Riduwan & Kuncoro, 2013: 145).

Based on the results of this study, the relationship between the variables is a causal or causal research, namely research conducted so that it can explain the relationship between variables, while one variable determines or causes values and other variables (Cooper & Schindler, 2014). This research method uses information taken from part of the population collected directly from the scene empirically and aims to know the opinions of some of the population on the object being studied. This *explanatory survey* aims from the research to explore or research through the problem or situation to gain insight and understanding. (Maholtra, 2009).

Malhotra continued explaining that "The survey method is a questionnaire structure that is verified to the respondents with specific information obtained". The data collection method used by the author to conduct this research is as follows:

a. Literary Research

This research is worked on to obtain theoretical aspects that can be done by reading, collecting, recording data, dictating, studying literature, and other sources so that it is directly related to the problem to be studied.

b. Questionnaire

A questionnaire is a written technique that is generally used as data collection material by giving a set of questions or statements to respondents who have been targeted, such as samples to be answered. The type of question asked is a closed question in the form of a statement, which means that the respondent only chooses an answer in the form of a given scale level. Thus, in this study, the authors distributed questionnaires with a total of 100 samples for respondents. This study includes three variables, namely, Purchase interest (Y) on Prospective Students of the University of Indonesia Building *Corporate Reputation* (X1) and *Customer Trust* (X2).

The sample is a part of the population. The sample consists of several members who will be selected based on the population (Sekaran & Bougie, 2010). The number of samples to be taken is determined by using the Slovin formula, namely: n=N1+Ne2

With an error tolerance limit of 10%, the sample calculation becomes:

n=1.0781+1.078 x 0.12= 99.8 ~ 100

Based on the equation of the Slovin formula, the author decided to take the entire sample of 115 respondents by distributing an online survey questionnaire through the *google form* feature and distributed it to 115 students and alumni from XYZ University.

According to Sugiyono (2018:121), a Validity Test is the degree of accuracy between the actual data that occurs in the object of research and data that can be reported by valid instrument researchers, meaning that the measuring instrument used to obtain data (measure) is valid. Valid means that the instrument can be used to measure what should be measured. The minimum requirement to be considered valid is if the level of significance is 0.05.

1. A reliability test is used as a basis for knowing that the questionnaire will show data that is accurate, precise, and consistent. Reliability shows consistent measurement results when used as a basis for measuring the same symptoms.
2. According to Sugiyono (2018:121), he argued that a reliable instrument that can be used several times to measure the same object would produce the same data. Based on the results of research carried out with reliability tests, it can be seen that if the reliability coefficient of the research instrument is greater than 0.70, then the overall statement is said to be *reliable*. Multiple Linear Regression, an analysis based on the relationship of one dependent variable with more other independent variables, was used. So it can be concluded that the independent variables in this study are *Corporate Reputation*, *Customer Trust*, with the dependent variable being Purchase Interest.
3. Coefficient of Determination, to show and determine the effect of the independent variable on the dependent variable. The magnitude of the influence of *Corporate Reputation* and *Customer Trust* on Purchase Intention can be determined by calculating the coefficient.
4. The T test (Partial) aims to find out how the influence of the *Corporate Reputation* (X1) and *Customer Trust* (X2) variables on the Purchase Interest (Y) variable. The test step is to determine the statistical hypothesis to be tested first as follows:
   a. The influence of *Corporate Reputation* (X1) on purchase interest (Y)
      - Ho : 1 = 0, that is there is no significant effect of *Corporate Reputation* variable (X1) on Purchase Interest (Y).
      - Ha : 2 0, that is, there is a significant influence of the *Corporate Reputation* variable (X1) on Purchase Interest (Y).

   b. The influence of *Customer Trust* (X2) on Purchase Interest (Y)
      - Ho : 1 = 0, there is no significant effect of the *Customer Trust* variable (X2) on Purchase Interest (Y).
      - Ha : 2 0, there is a significant effect of the *Customer Trust* variable (X2) on Purchase Interest (Y).

5. The F test (simultaneous) aims to determine whether the research model meets the F arithmetic requirements so that it can be continued for the t test, so that the hypothesis in the F test is as follows:
   - Ho : 1= 2= 0, (The research model cannot be accepted significantly)
   - Ho : 1≠β2≠ 0, (The research model can be accepted significantly)

C. Results And Discussion

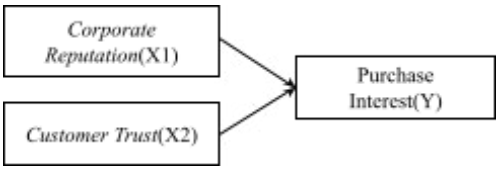

Figure 2 The relationship between variables X, X, and Y
Source: Research Results 2021

Variable Validity and Reliability Test

Table 4.1

Validity of *Corporate Reputation* Instruments (X1), *Customer Trust* (X2), Purchase Interest (Y)

No	Items	Sign	Sign Level	Conclusion
1.	X1	0 ,000	0.05	Valid
2.	X2	0.000	0.05	Valid
3.	X3	0.000	0.05	Valid
4.	X4	0.000	0.05	Valid
5.	X5	0.000	0.05	Valid
6.	X6	0.000	0.05	Valid
7.	X7	0.000	0.05	Valid
8.	X8	0.000	0.05	Valid
9.	Y1	0.000	0.05	Valid
10.	Y2	0.000	0.05	Valid
11.	Y3	0.000	0.05	Valid
12.	Y4	0.000	0.05	Valid

Source: 2021 Data Processing Results

Based on Table 4.1 shows that the results of the SPSS Vers.20 output significance for each statement of *Corporate Reputation* (X1), *Customer Trust* (X2), Purchase Interest (Y) sign 0.05; thus, all statements of *Corporate Reputation* (X1), *Customer Trust* (X2), Purchase interest (Y) is valid, then all of these data can be used as material for research analysis purposes.

Table 4.2

Reliability of Corporate Reputation Instruments (X1), Customer Trust (X2), Purchase Interest (Y)

Variable	count	A	Conclusion
Corporate Reputation	0.790	0.70	Reliable
Customer Trust	0.8692	0.70	Reliable
Purchase interest	0.908	0.70	Reliable

Source: 2021 Data Processing Results

Based on table 4.2, it is known that the results for the variables of *Corporate Reputation* Instruments, *Customer Trust*, and Purchase interest > 0.70. So it can be concluded from these data that this research instrument is declared reliable.

Multiple Regression Analysis

In the multiple regression model, which has one dependent variable (Y), namely Purchase Interest and two independent variables, *Corporate Reputation* (X1) and *Customer Trust* (X2), which are as follows:

Table 4.3 Regression Coefficient

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,452	0,333		4,365	0
	reputation	0,242	0,227	0,145	1,065	0,29
	trust	0,418	0,203	0,28	2,063	0,04

a. Dependent Variable: minat

Correlations

		minat	reputation	trust
minat	Pearson Correlation	1	,361**	,392**
	Sig. (2-tailed)		0	0
	N	115	115	115
reputation	Pearson Correlation	,361**	1	,771**
	Sig. (2-tailed)	0		0
	N	115	115	115
trust	Pearson Correlation	,392**	,771**	1
	Sig. (2-tailed)	0	0	
	N	115	115	115

**. Correlation is significant at the 0.01 level (2-tailed).

So from the results of data processing can be made a regression equation as below:

Y = 1.452 + 0.242 X1 + 0.418X2 + e

Information:

Y = Purchase interest

a = Constant value

b = Regression coefficient parameters

X1 = *Corporate Reputation*

X2 = *Customer Trust*

e = Error

Based on table 4.3 of the two variables tested, the most contributing is the

Customer Trust variable, while the *Corporate Reputation* variable has the second contribution after *Customer Trust*. So it can be concluded that in this case, the correlation in table 4.4 *Customer Trust* is 39.2%, and *Corporate Reputation* is 36.1% in the category of the level of influence of the two variables at the LOW level (Sugiono, 2013).

Partial Significance Test (T Test)

Table 4.5

t test results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,452	0,333		4,365	0
	reputation	0,242	0,227	0,145	1,065	0,289
	trust	0,418	0,203	0,28	2,063	0,041

a. Dependent Variable: minat

Source : SPSS 20 Data Processing

From Table 4.5, we can see that the influence of the significant value between variables shows one by one the independent variables on the dependent variable are:

a. The significance value of *Corporate Reputation* is 0.289 > the significance level of 0.05 means Ho is accepted, and H_1 rejected, or the meaning is that *Corporate Reputation* has no effect on Purchase interest.

b. The significance value of *Customer Trust* is 0.041 < the 0.05 level of significance, meaning that Ho is rejected and H_1 accepted, or *Customer Trust* has an effect on Purchase Intention.

Simultaneous Significance Test (F Test)

Table 4.6

F . Test Results

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10,61	2	5,303	10,819	,000[b]
	Residual	54,9	112	0,49		
	Total	65,51	114			

a. Dependent Variable: minat

b. Predictors: (Constant), trust, reputation

Source: Data Processing Results SPSS 20

Based on Table 4.6 obtained from the research significance value of 0.000 or means significance level of 0.05, so the hypothesis states that the *Corporate Reputation* (X1), *Customer Trust* (X2) variables on Purchase Interest (Y) are statistically accepted (significant).

Coefficient of Determination

Table 4.7

Coefficient of Determination

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,402[a]	0,162	0,147	0,70013

a. Predictors: (Constant), trust, reputation

Source: Data Processing Results SPSS 20

From Table 4.7, the value with the coefficient of determination (RSquare) is 0.162, which means that changes in purchase interest are influenced by changes in *Corporate Reputation* and *Customer Trust* of 16.2% so that it shows that other factors can be used to increase Purchase Interest in addition to the *Corporate Reputation* and *Customer Trust* factors, which are 83.8%

Conclusions And Suggestions

Conclusion

1. Research results that have been processed using SPSS Vers. 20 shows that testing the first hypothesis partially shows that *Corporate Reputation* has no significant effect on Postgraduate Purchase Interest at XYZ University with a significance value of 0.289 > 0.05.
2. Based on the results of SPSS Vers. 20 that partially testing the second hypothesis *Customer Trust* has a significant influence on Postgraduate Purchase Interest at XYZ University with a significance value of 0.041 <0.05.
3. Simultaneous hypothesis testing from the results of SPSS Vers data processing.

   20 it is stated that *Corporate Reputation* and *Customer Trust* significantly influence Postgraduate Purchase Interest at XYZ University by 16.2%, and the rest is influenced by other variables of 83.8% outside the variables that have been studied.

Suggestion

1. Postgraduate XYZ University must pay more attention to *Customer Trust* to increase Trust in the University of Indonesia Alumni and Students Build to attract Purchase interest.

2. Researchers hope that this research will be helpful as a reference for further research on the same topic. Researchers also hope that the results of this study will foster curiosity for further research, which can be done through interviews or distribution in the form of a questionnaire widely so that it will obtain maximum results.

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Organizational Climate of Bandung City Regional Secretariat Employees

Kartika Nuradina

Abstract
The rapid development in Indonesia has created new challenges for government agencies to improve the institutional aspects and good governance. This led to the need of understanding the organizational climate within Indonesia's government agency. Organizational climate is an influencing factor to various important aspects of the organization, such as work performance and work satisfaction of the employees. The objective of this study is to investigate the organizational climate of employees of Bandung City Regional Secretariat, a government agency with the role of helping the policy formulation and coordinating othergovernment agencies. A questionnaire of organizational climate was distributed with 80respondents' answers. The results of the study showed 96.25% of the respondents perceived the organizational climate to be favorable, and 3.75% of the respondents perceived it as unfavorable. Further observation on the nine dimensions oforganizational climate highlighted the dimension of support to be the most favorable which indicates how employees support each other in a good working environment. Policy implications of this study can be used by the government agency as initial understanding and improvement of the organizational climate as part of increasing the quality of work performance and satisfaction within the organization.
Keywords: Organizational Climate, Work Performance, Bandung City, Regional Secretariat
JEL Classification: I38
The authors should add 1- 3 JEL Classification Number. Information guide for the Journal of Economic Literature *(*JEL) can be found at https://www.aeaweb.org/jel/guide/jel.php

Introduction

Globalization has been influencing world development, including in Indonesia with many challenges faced by both state-owned enterprises, hereafter referred to as BUMN (*Badan Usaha Milik Negara*) private companies. The government as part of BUMN realized this situation and hence initiating the bureaucratic reform of good governance, in particularimproving the institutional aspects, business process, and the human resources. In regards to the bureaucratic reform of good governance, the process often linked with government employees, hereafter referred to as PNS (*Pegawai Negeri Sipil*) which plays an important role in the administration of the country in every level of provincial and local (city/regency) level. The local government of Bandung City has been implementing the bureaucratic reform since 2007 with the Electronic Procurement program for the aspect of auction, as well as in 2011 with the E-Government program which focused on the integration of government into information technology and also known as Bandung Integrated Resources Management System (BIRMS). One of the government agencies in Bandung City with a vital role in good governance is the Regional Secretariat. According to the strategic plan of Regional Secretariat in 2014, there are several identified issues in regards to the service of the agency, in particular to the issue of policy and performance accountability. Many change were made to encourage high performance from the Bandung City government. One of the changes is bureaucratic reform. Bureaucratic reform is carried out in order to realize good governance. In other words, bureaucratic reform is a strategic step to build the state apparatus to be more efficient and effective in carrying out the general tasks of government and national development. (Source : http://www.menpan.go.id/reformasi-birokrasi/makna-dan-dunia). The benchmark for the success of bureaucratic reform can be seen from how many indicators can be achieved. These indicators include : a) the absence of corruption; b) there is no violation/sanction; c) APBN and APBD are good; d) all programs are completed properly; e) all permits are completed quickly and accurately; f) good communication with the public; g) effective and productive use of time (working hours); h) consistent and sustainable application of rewards and punishments, and i) real development outcomes (pro-growth, job creation, and pro-poverty reduction; that is creating jobs, reducing proverty, and improving people's welfare). (source; http://www.menpan.go.id/reformasi-burokrasi/534-ukur-keberhasilan-rb). This change brings changes to the working conditions in the Bandung City government work units. Works targets that demand speed and accuracy of work to achieve the expected government performance, encourage changes in the work system, tasks, relationship between superiors and subordinates, relationship between co-workers, as well as changes in the reward and punishment

imposed. This can lead to different perception among government employee (PNS). To understand further about the actual condition in the working environment of Bandung CityRegional Secretariat, this study conducted an interview with the government employee in the institution which revealed the issue of work load, due to the limited number of employees and high workload. In addition, the interview also provided the initial situation of a working environment with friendly relationships among other employees, for example through supporting each other for work-related stuff. The statement from the interviewee highlights that the friendly relationship was established due to the interaction between employees in andout the working hour which lead to the establishment of trust. Despite the positive aspect from the relationship, there is also another concern on the dependency to others, especially as the majority of the employees are entering the retirement age hence introducing technological innovation is one of the challenges and often to be given to the younger employees. Aside from the interview, this study also distributed questionnaires to ten employees of Bandung City Regional Secretariat to understand the existing situation in the agency. Several issues were mentioned from the results of the questionnaire, for example the issues of attendance time with employees coming late, as well as the issue of insufficient reward from wage which is prominent due to the high workload. Based on the initial observation from the interview and questionnaire, the results provided initial understanding on the work environment phenomenon in Bandung City Regional Secretariat. Different perceptions from the employee were highlighted, both positive and negative perceptions on their working environment. Perception is defined as a process of selection and interpreting information to provide the illustration for an individual (Steers 1987). The condition perceived by employees will affect their behavior, attitude, and work performance which will influence the overall organization productivity. The illustration of the working environment which is internalized by the employee is defined as organizational climate(Litwin & Stringer 1968). Furthermore, the organizational climate will influence the motivation, work performance, and work satisfaction (Davis 1981). Establishing an organizational climate which supports the achievement of organization is relatively difficult due to the uniqueness of each employees' behavior. Nonetheless, a good and comfortable organizational climate is important in particular to unlock the potential of every employee and influence the working motivation. Based on the phenomenon in Bandung City Regional Secretariat and the importance of organizational climate, this study will explore the situation further to investigate the overall government employee's organizational climate. The results from this study can be used as policy implications for the government agency in Bandung City to evaluate and improve their organizational climate and improve the employee's work performance.

Literature Review

The concept of organizational climate has been drawing much attention for researchers in regards to the theoretical framework. For example Litwin & Stringer (1968) stated that organizational climate concept as referring to a set of measureable properties of the work environment, perceived by the people who live and work in that environment. Another definition stated that organizational climate is the human environment within which anorganization's employee does the work (Davis 1981). There are several dimensions which influence the organizational climate as follows: (1) structure, (2) responsibility, (3) rewards, (4) risk, (5) warmth, (6) support, (7) standards, (8) conflict, and (9) identity (Litwin & Stringer 1968). The organizational climate will then be perceived subjectively by the employees hence the difference of perceptions from the employees on organizational climate.There is also the desire from the employees for a favorable climate in the organization, as favorable climate can increase the performance and work satisfaction (Davis 1981). As the organizational climate will be perceived in a different manner, the aspect of perceptionis also important in this study. Perception is defined as a process of selection, organization, and the ways people interpret the information and stimuli from the environment (Feldman & Arnold 1986; Milton 1981). There are three factors which influenced perception, (1) characteristics of the entity, (2) characteristics of the person, and (3) characteristics of the situation (Feldman & Arnold 1986). Furthermore from Feldman & Arnold (1986), the characteristics of the person can be classified further into attitude, emotion, experiences, and needs, while characteristics of the situation are classified into stress and timing. Through the perceived favorable organizational climate, the employee's work performance can be improved and lead to higher work satisfaction and productivity (Litwin & Stringer 1968).

Methodology

This study utilizes the approach of non-experimental, which is a systematic empirical study with no direct control on the variable (Kerlinger 1993). In addition, this study will also usethe quantitative approach and descriptive. The objective of descriptive research is to create description, systematic illustration and accuracy for the fact and traits of investigated phenomenon (Nazir 2005). In this study, the investigated phenomenon is the organizational climate of Bandung City Regional Secretariat. To collect the data for analysis, the method of questionnaire survey was implemented. The questionnaire survey used refers to the organizational climate theory from Litwin & Stringer (1968) which include the nine dimensions influencing organizational climate of structure, responsibility, rewards, risk, warmth, support, standards, conflict, and identity.

The structure dimension measures the feeling of a n employee in regards to the bureaucracy within the organization, work procedure, and the policies implemented in the organization. For the responsibility dimension, the measurement is focused on the employee's feeling of their responsibility in decision-making for work-related activity and problem solving. The reward dimension measures the employees' feeling on the reward they received for the work they have done, while the risk dimension is measures what employees think about work with risk and challenges, as well as how to face such work. The fifth and sixth dimensions of warmth and support measures how employees felt the relationship and support from other employees. The last three dimensions are standards dimension which investigate the employee's feeling about the clarity of work goals, conflict dimension which measures employee's feeling on howother employee managed to listen to different types of opinion, and identity dimension which measures the pride of being a part of the organization. The total scores from the nine dimensions will then be categorized further into two different perceptions of favorable perception, and unfavorable perception. Favorable perception can be interpreted that employee's perceive the organizational climate as an enjoyable environment and already fulfilled their expectation and personal values, while unfavorable perception is the opposite, which is the perception of a working environment which is not enjoyable.

The population of the sample is all employees from Bandung City Regional Secretariat, which is 350 employees. Population is not only limited to the studied subject, but also including all the characteristics from the subject (Sugiyono 2006). The sample taken for this study is several employees from the agency which was selected through simple random sampling technique. This technique was done through random selection of samples from the population, hence every member of the population has the same probability to be selected aspart of the population (Sudjana 1996). The minimum number of samples needed for this study was calculated with the Slovin formula: $n = N/(N\alpha^2+1)$. With n is the minimum number of samples, N is the population size, and α is the margin of error where for this study the value is set in 10%. Through the formula calculation, the number of minimum samples needed for this study is 78 employees, and the total number of samples collected in this study was 80, where the samples were collected from September to October 2015.

The questionnaire distributed in this study utilized the approach of self-administered questionnaires to get the primary data from the respondents. First, the study asked respondents' identities which include their age, gender, educational level, duration of working in Bandung City Regional secretariat, and their current job position. In addition, the questionnaire used likert-scale with five categories of 1 (strongly disagree) up into 5 (stronglyagree). As explained above, the content of the questionnaire was from the organizational climate questionnaire (Litwin & Stringer 1968) which was adapted to be appropriate for the study setting. To ensure the quality results from the organizational climate questionnaire instrumentimplemented in this study, validity test and reliability test were used. Validity test is used to investigate whether the questionnaire's instrument can measure the variables observed (Kerlinger 1993).

In this study the validity test was done through content validity from discussion with experts, and construct validity through measurement of Rank-Spearmen value.Reliability test was also done to investigate the consistency and accuracy of the questionnaire's instrument. Reliability refers to the consistency of the scores achieved by the same respondent when they were tested with the same instrument in different times and variety of different question items (Anastasi & Urbina 1997). The instrument for the reliability test used in this study is Alpha Cronbach done through the SPSS program which results in a reliability value of 0.827 which can be interpreted that the questionnaire item is reliable.

There were a total of 40 question items in the distributed questionnaire, which can be divided further into positive items and negative items. Based on the results from the respondents, the organizational climate can be classified into four different categories of enjoyable (M), relatively enjoyable (CM), relatively not enjoyable (CTM), and not enjoyable (TM). The enjoyable and favorable organizational climate is reserved for categories M and CM, while not enjoyable and unfavorable organizational climate is reserved for categories CTM andTM. The analysis section in this study will be focused with descriptive statistics. The approachof descriptive statistics is functioned to illustrate the object of the study based on sample or population data (Sugiyono 2006).

Results

The socio-demographic of the total 80 respondents from Bandung City Regional Secretariat based on their gender, age group, educational level, duration of working in the agency, and job position can be seen in Table 1. First, taking a look at the gender of the respondents, the results were fairly distributed with a majority of 44 male respondents (55%) and followed with 36 female respondents (45%). For the age group, the majority of respondents were within 36-45 years old (45%), followed by 26-35 years old (28.75%) which indicated the majority of respondents were within the productive age group. The educational level of the respondents in this study were majority came with the background of bachelor's degree (50%), followed with senior high degree (26.25%) and master/doctoral degree (15%). Meanwhile for the indicator of duration working in the agency, majority of the respondents have been working for 20 years (27.5%), followed with employees who have been working for 10-15 years (23.75%), 5-10 years (17.5%), 15-20 years (12.5%) and 3-5 years (10%) which give a fairly distributive results. The same trend can also be seen for the job position, with 37.5% of the respondents working as government assistant, 32.5% of the respondents working as general administration assistant, and 30% of the respondents working as economic and development administration assistant.

Table 1 Socio-demographic characteristics of the respondents

Socio-demographic Characteristics		Frequency (person)	%
Gender	M	44	55%
	F	36	45%
Age Group	≤ 25 years old	0	0%
	26-35 years old	23	28,75%
	36-45 years old	36	45%
	≥ 46 years old	21	26,25%
Educational Level	Junior High	4	5%
	Senior High	21	26,25%
	Associate Degree	3	3,75%
	Bachelor Degree	40	50%
	Master/Doctoral Degree	12	15%
Duration of Working in the Agency	≤ 1 year	2	2,5%
	1 – 3 years	5	6,25%
	3 – 5 years	8	10%
	5 – 10 years	15	18,75%
	10 – 15 years	18	22,5%
	15 – 20 years	10	12,5%
	≥ 20 years	22	27,5%
Job Position	Government Assistant	30	37,5%

	Economic and Development Administration Assistant	24	30%
	General Administration Assistant	26	32,5%

Moving on to the results for the organizational climate profile as seen in Table 2, the majorityof the respondents (68.75%) perceived the organizational climate within the agency to be categorized as relatively enjoyable, while 27.5% of the respondents perceived it to be enjoyable, and 3.75% perceived it in the opposite manner of relatively not enjoyable, but no respondents were within the not enjoyable category (0%). The favorable perceptions can be seen by the majority of the respondents who perceived the structure, policy, and working regulations in Bandung City Regional Secretariat to be clear, and the ability for decision making without the need to ask to the higher ups and be responsible to the assigned work. In addition, the favorable organizational climate can also be interpreted that the rewards received by the employees were perceived to be appropriate, as well as warm relationship between theemployees, with support give and ability to openly express opinion and problem-solving which can result in a positive behavior and improve the employees' performance.

Table 2 Respondents' Organizational Climate Profile

Categories		**Frequency (person)**	**%**	
Favorable	Enjoyable (M)	22	27,5%	96,25%
	Relatively Enjoyable (CM)	55	68,75%	
Unfavorable	Relatively Not Enjoyable (CTM)	3	3,75	3,75%
	Not Enjoyable (TM)	0	0%	
Total		**80**	**100%**	**100%**

The specific results for the organizational climate based on the nine dimensions can be seenin Table 3. For the dimension of structure, the total percentage for favorable category(enjoyable and relatively enjoyable) is 96.25% and only 3.25% of respondents in unfavorablecategory. The same trend can be seen in the other 8 dimensions of responsibility, reward, risk,warmth, support, standard, conflict and identity, with more than 70% of the respondents beingwithin the favorable category. In particular for the dimension of warmth and identity with 92.5% and 96.25% of respondents perceived it as favorable respectively, and dimension of support with the highest favorable of 97.5%. This result can be interpreted that the majority of the respondents perceived each dimension of organizational climate to be appropriate and fulfill the employees' expectations. The least number of respondents in favorable category can be seen in reward dimension with 73.75% of respondents categorized as favorable, and 26.25% of respondents as unfavorable. This result shows that the employees of Bandung City Regional Secretariat perceived the reward to make their ends meet, as well as appropriate according to their expectations and values however there are several aspects that are not yet satisfactory hence the number of employees with perception of unfavorable can be seen to be relatively high.

Table 3 Organizational Climate Profile Based on the Nine Dimensions

Dimension	*Favorable*				*Unfavorable*				Total Respondents
	Enjoyable		Relatively Enjoyable		Relatively Not Enjoyable		Not Enjoyable		
Structure	31	38,75%	46	57,5%	3	3,75%	0	0%	**80**
Responsibility	9	11,25%	55	68,75%	16	20%	0	0%	**80**
Reward	9	11,25%	50	62,5%	21	26,25%	0	0%	**80**
Risk	15	18,75%	53	66,25%	12	15%	0	0%	**80**
Warmth	19	23,75%	55	68,75%	6	7,50%	0	0%	**80**
Support	25	31,25%	53	66,25%	2	2,5%	0	0%	**80**
Standard	19	23,75%	50	62,5%	11	13,75%	0	0%	**80**
Conflict	17	21,25%	47	58,75%	16	20%	0	0%	**80**
Identity	30	37,50%	47	58,75%	3	3,75%	0	0%	**80**

Discussion

In this section, each of the dimensions for organizational climate based on the nine dimensions will be discussed, in particular to the category of favorable and unfavorable. For the structure dimension, according to the results of the questionnaire, the employees were able to understand the job and role structure within the organization, due to the clarity of the assigned roles and function. In addition, the majority of the employees have been working for more than 10 years, which is another reason why he employees were able to understand clearly the work procedure and organizational structure. This aspect is very important in government administration, not only in understanding the work procedure, but also the supporting bureaucracy and regulation in the working environment, which will help in the formulation oflocal government policy and coordinating the various government agencies.

For the dimension of responsibility, the trend illustrates how in general the employees felt that the higher ups were given enough opportunity of decision making in the relevant field ofwork. The opportunity given will lead to growth of responsibility by the employees to the work given to them, which will also influence how the employees understand their responsibility. Nonetheless, the results of unfavorable observations in this study also indicate thatthere are employees who cannot manage to provide their work in a timely appropriate manner, hence influencing the organizational climate. Meanwhile, for the dimension of reward, the majority of the respondents were appreciated in their daily work, in addition to the appropriate reward according to their work performance. The aspect of reward can be provided in the form of praise from the higher ups and salary. In this study, the existence of unfavorable perception indicates that some of the employees also felt the aspect of rewardcan be improved within the organization. As for reward for salary, the value refers to the regulation from the government which is classified according to the job position, this situation is also problematic, as the employees expect higher salary, but they understand the restriction from the regulation.

For the dimension of risk, the lean on favorable category shown that the job given in the organization is considered to be challenging, as well as motivating the employees to do their best. However, the unfavorable perception from the employees can be influenced due to the perception of work characteristics that are monotonous and boring. The negative perceptions can be explained by referring to the majority of respondents' characteristics which have already worked for more than ten years, hence the same daily work becomes negatively perceived by the employees. Despite the perception of monotonous work, looking at the warmth dimension shows that the agency has the positive aspect of communication and support. The favorable perception in the warmth dimension also illustrates

the aspect of established trust among the employees and higher ups, which can lead to comfortability in communicating and expressing opinions to support the work assignment.

Moving on to the discussion of support dimension, the favorable perception indicates on how the employees supporting each other, in particular when an employee experienced hardship in their work, other employees will help and support. This kind of collaborative work, not only from employees but also from higher ups, will motivate the workers to do better in their job. The collaborative work of employees is also related with the dimension of standard in the organizational climate, where the agency of Regional Secretariat illustrates the high work demands. The performance of the employees were clearly described in a variety of governmentindicators, where monitoring of the performance is also a part of the organizational climate. In this study, the majority of respondents understand that they have the responsibility to give their best in their job and according to their job position. The expectation from the favorable perception on this dimension is the influence to improve job performance.

For the dimension of conflict, this study managed to investigate the favorable perception within the agency which can be interpreted as the capability of employees to express their opinion, despite the difference of opinion with other employees. The comfortability of respondents in expressing their opinion is highly related with the working environment, as well as the warmth dimension with support among the employees. In addition, the favorable perception of conflict dimension also helps if miscommunication or problems in communication happen, where the employees will help each other in solving the problem openly, hence creating a comfortable work environment. Nonetheless, the concern of unfavorable perception can be influenced based on the existence of employees who reluctantly express their opinions. The refusal of expressing opinions indicates that for certain employees the working environment is not harmonious enough, and something that thegovernment agency should reflect upon. This leads to the last dimension of identity with favorable perception reflecting on the pride of the employees as part of the organization. The well-known difficult selection to apply for a position in the government may influence the pride of the organization members. The aspect of pride within the employees can affect their comfortability while working. This is also in regards to the favorable dimensions of warmth and support, where each of the dimensions helps to establish the support, trust, and cares between each employee, hence the overall comfortability and loyalty of the organization will be improved.

In overall, the organizational climate in Bandung City Regional Secretariat in this study was perceived as favorable and as according to the expectation, hope, and values of the employees. Among the nine dimensions, support was stated to be the most favorable, followed by the warmth dimension. Both of these dimensions established a comfortable working environment, supported with good communication. However, this study also noted the existence of unfavorable perception to certain dimensions, such as reward. Despite the majority of respondents perceived this dimension to be favorable, organizations should take note that some of the respondents felt the salary given by the organization is considered to be not enough although they also understand the limitation given by government regulation on the criteria of the salary. In addition, the leadership factor within the organization should also be considered to influence the organizational climate. Based on the leadership, the communication aspect between higher ups and other employees can be improved, in particular by motivating the employees to improve their performance. According to the warmth and support dimensions, Bandung City Regional Secretariat can be defined to be an organization with good relationships among employees, with support can be seen by every organization member. Thus in overall the favorable perception of the organizational climate should be maintained by Bandung City Regional Secretariat, while at the same time the dimensions with unfavorable perceptions should be improved to create a more comfortable working environment within the organization.

Conclusion

In this study the organizational climate of employees in Bandung City Regional Secretariat was perceived to be favorable and fulfilled the expectation, hope, and values of the employees. Looking further at each of the nine dimensions of organizational climate, the dimension of support was perceived to be the most favorable dimension which indicates the existence of support among employees of the organization. The support given by employees and higher ups should be maintained with the aspect of communication and appreciation.

At the opposite result, the reward dimension was perceived to be the least favorable, despite the

majority of the respondents still perceived this dimension to be favorable. The lesser favorability of reward dimension indicates that the salary and bonus received by the employees can be improved. The results of this study can illustrate the dynamic of the organizational climate in a government agency of Bandung City, Indonesia. Furthermore, the monitoring of work performance from the employees should be done in routine manner.The implication of this study can be used by the government agency to explore further about the perception of their employees on the organizational climate.

Limitation

Limitation from this study is related to the scope that is limited only in one government agency in Bandung City. PNS plays important role in the government performance in Indonesia, and future studies should consider investigating other government agencies and BUMN to investigate in comprehensive manner how to improve the good governance aspect from various perspectives of organizational climate and other theoretical frameworks, as wellas understanding the correlation of organizational climate with other related variables, for example work motivation, work satisfaction, and work performance.

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Increased User Engagement and Purchase Intention with Human-Centric Brand and Gamification on E-commerce Websites and Mobile Applications

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Abstract
Nowadays, online shopping is becoming more popular. There are several e-commerce website applications and mobile e-commerce applications available; however, many of these websites and mobile applications have been impacted by a decrease in traffic and customer Purchase Intention. The goal of this study is to see if using Human-Centric Branding and Gamification on websites and mobile apps can boost User Engagement and Purchase Intention. The Partially Least Square Analysis test is used to test hypotheses. 205 online questionnaires were used to process the data in this study. The findings of this study show that adopting Human-Centric Branding and Gamification into website and mobile applications has a significant impact on User Engagement and Purchase Intention.
Keywords: Gamification, User Engagement, Purchase Intention, Human-Centric Brand, E-Commerce Applications.
JEL Classification: [example: D43, L12, G32]
The authors should add 1- 3 JEL Classification Number. Information guide for the Journal of Economic Literature *(*JEL) can be found at https://www.aeaweb.org/jel/guide/jel.php

Introduction

Since the late 1990s, there have been e-commerce applications. There are a number of long-standing e-commerce applications in Indonesia, such as bhinneka.com (Intana, 2012). Every year, e-commerce applications increase in tandem with the times. The e-commerce market will get more competitive as time goes on. In Q2 2021, there will be at least ten e-commerce sites in Indonesia with the most visitors, are: 1). Tokopedia 2). Shopee 3). Bukalapak 4). Lazada 5). Blibli 6). Bhinneka 7). Orami 8). Ralali 9). JD ID 10). Zalora (Sugianto, 2021). Therefore, the corporation must compete to entice more customers to visit the website application or mobile application, with the expectation that they will make purchases through the website and application.

It is vital to provide an engagement experience for the user on the website and mobile application in order to attract client buying interest (Tian et al., 2021). Companies use purchase intent as a critical indication. Purchase Intentions assist them in predicting consumer desire to make a purchase within a particular time frame and act as a proxy for actual behavior, such as a tendency to repurchase certain products and the ability for consumers to select certain products (Bianchi et al., 2019). The online Purchase Intention variable was chosen as the basis for the study of buying behavior based on the literature. Online purchase intent is a primary determinant of online store purchasing behavior. The factors that influence online purchasing intentions are believed to be influenced by psychological considerations. (Peña-García et al., 2020).

Previous research on Purchase Intention revealed that the user's emotional image cognition depends on the user's online situation at that time (Oh et al., 2018), therefore there's a chance the Purchase Intention will be unfavorable (Mao et al., 2020). The mobile application User Engagement is increased to increase Purchase Intention (Bitrián et al., 2021). Several factors that can increase User Engagement are by increasing interaction on the website (Han et al., 2019). Applying Gamification to a website or mobile application is one way to promote interaction (Suh et al., 2018). Because almost everyone in the world enjoys games, adding game-like interactions to non-game applications would boost the user's emotional cognitive positive (Mullins & Sabherwal, 2020) and loyalty (Toth & Tovolgyi, 2017) to the application increases (Suh et al., 2018). Furthermore, good interactions will be obtained if a nice digital environment is built between customer firms (Hirayama, 2019). The application of human-centric in digital business is critical in order to boost the positive social effect and ensure that the company and the brand treat the company and the brand with respect (Agafonova et al., 2021). A technology can develop quickly, but without a humanize touch, the brand will not get a balance between high-tech and high-touch (Kartajaya, H., Kotler, P., & Hooi, 2019).

The major goal of this research is to look at a novel approach of generating client Purchase Intention. Furthermore, the interaction of high-tech and high-touch on online apps and mobile applications will be examined in greater depth. The impact of Human-centric Brand and Gamification on User Engagement and Purchase Intention is also highlighted in this study. As a result, the findings of this study are expected to assist e-commerce businesses in competing for more customer traffic.

Literature Review

Purchase Intention

The possibility that a consumer plans or is willing to purchase a specific brand in the future is referred to as Purchase Intention (Chetioui et al., 2020). Purchase Intention is an important indication for firms (Bianchi et al., 2019) to assist them forecast the likelihood that consumers will make a purchase in a given period (Jaya, 2015), the desire to buy again (Weismueller et al., 2020) and the willingness to try something new (Nam et al., 2017). A person's intention to buy a brand with an indicator is referred to as Purchase Intention. The terminology Purchase Intention refers to a person's or a customer's desire to buy a product from a particular brand, but plans to do so at a later date (Chetioui et al., 2020). The urge to utilize the product, to test it out, and to see it up close and personal can all be read as Purchase Intention (Jaya, 2015). As a result, a consumer who wishes to purchase and order a product is included in the Purchase Intention category. (Bianchi et al., 2019).

User Engagement

User Engagement refers to a significant cognitive and emotional attention on media, content, and applications, and includes physical interaction with the interface as well as taking further actions on content, such as managing and sharing it (Oh et al., 2018). The study of User Engagement and how to evaluate it has piqued the interest of researchers in human-computer interaction (O'Brien et al., 2018). The depth with which a user interacts with a digital system determines the quality of the user experience. Because User Engagement in a digital environment can yield beneficial effects, it is more than just user satisfaction. User Engagement allows users to choose when, where, and how they participate in activities that meet their requirements, save time, perform tasks, entertain them, or link them with others (Oh & Kang, 2021), (Kim et al., 2013). On mobile applications, User Engagement motivation influences perceived value, satisfaction, and mobile engagement intentions. Engagement is a state marked by energy and engagement, which can be conceptualized as a flow of behavior without a purposeful mindset: for instance, control(Hajarian et al., 2019), attention, focus (Bitrián et al., 2021), curiosity, and/or intrinsic desire (Kim et al., 2013).

According to previous study, there is a link between website User Engagement characteristics and individual intents to buy from the website (Jain & Yadav, 2019). In online shopping, User Engagement has an impact on buy intent (Algharabat, 2018). The psychological components of the behavioral parameters of user involvement were obtained based on prior studies, specifically (Oh et al., 2018): Physical interaction has an impact on user attitudes and behavioral intents, interface assessment is the initial appraisal of the user interface, absorption is the amount of time spent engaging with material, and digital outreach is when people share content with other people (Oh & Kang, 2021).

Human-Centric Brand

The study of user perceptions, attitudes, and behavior in connection to energy consumption, comfort, and sustainability is the foundation of human-centric theory (Sonetti et al., 2018). The application of human values that are visually appealing, cognitively appealing, socially appealing, and emotionally appealing while displaying a strong personality and morality is known as a human-centric brand (Jaya et al., 2020). Them are increasingly asking for human-centric companies with characters that are comparable to humans and can engage with customers as equal friends in the digital age (Kartajaya, H., Kotler, P., & Hooi, 2019). Human-centric brands must establish the boundaries of responsibility and economic viability from a marketing standpoint. In the digital world, the company's obligations include social and commercial ethics, information security, and decision-making freedom for both business partners and consumers (Hirayama, 2019). Physicality (logo shape, logo color, logo design), intellectuality (product innovation), sociability (connection with customers), emotionality (inspiring messages), personability (showing their shortcomings, taking full responsibility) and morality are all characteristics of human-centric brands (having integrity). Companies must be able to service the

personal requirements of clients in order to be considered a human-centric brand (Graessler & Poehler, 2019).

Gamification

Outside of the gaming industry, Gamification refers to the use of game technology and game design methodologies (Toth & Tovolgyi, 2017). Gamification is a continual invention and development in the connected digital business that combines game aspects and game thinking into non-gaming contexts to encourage and motivate individuals while also increasing their perception and engagement (Lu & Ho, 2020). Gamification is a method of achieving objectives such as User Engagement, purchase intent, brand loyalty, and brand exposure through the use of games (Suh et al., 2018). Mechanic, Dynamic, and Aesthetic components make up the Gamification model (Golrang & Safari, 2021). Immersion, Achievement, and Social Interaction are some of the elements of Gamification interaction (Xi & Hamari, 2020). The majority of Gamifications have positive outcomes, but there are those that have negative outcomes in terms of engagement (Hamari et al., 2014).

Hypothesis Development

Human-Centric Brand to User Engagement

Human-Centric Brand is the overall character of a product that is similar to human characteristics and can interact with customers like a friend (Kartajaya, H., Kotler, P., & Hooi, 2019). The application of Human-Centric Brand can increase user productivity and wider use (Hirayama, 2019). Based on this research, the first hypothesis is obtained is:

H1: Human-Centric Brand has a positive effect on User Engagement

Gamification to User Engagement

The application of Gamification in non-game applications increases user motivation and increases User Engagement (Toth & Tovolgyi, 2017). Gamification increases user motivation to use non-game applications. The addition of non-game features in game applications increases User Engagement (Scheibe & Zimmer, 2019). Gamification is a powerful tool to increase User Engagement and can be used in various fields, such as e-commerce, education, healthcare, entertainment, and non-profit and enterprises (Lu & Ho, 2020). Based on previous research, the second hypothesis was obtained, namely:

H2: Gamification has a positive effect on User Engagement.

Human-Centric Brand to Purchase Intention

The application of Human-Centric in the marketing strategy makes a positive effect. With this application, it makes the business more socially oriented. However, this implementation will have new risks at the time of implementation. This new risk will occur in existing businesses and from a social perspective (Agafonova et al., 2021). Human centric applied to digitalized business will give customers freedom in decision making (Hirayama, 2019). Based on the research above, the third hypothesis was obtained is:

H3: Human-Centric Brand has a positive effect on Purchase Intention

Gamification to Purchase Intention

The application of Gamification on website applications for e-commerce companies can increase User Engagement and Purchase Intention (García-Jurado et al., 2021). Other research states that the application of Gamification can change customer online habits and affect Purchase Intention (Sigala, 2015). The application of appropriate Gamification will have a positive effect on User Engagement. This affects the customer's partition in spending a certain amount of money (Golrang & Safari, 2021). Gamification increases User Engagement in online shopping, this also has an impact on the level of visits to online shops, which means it increases Purchase Intention (García-Jurado et al., 2021). Based on the research above, the fourth hypothesis is obtained as follows:

H4: Gamification has a positive effect on Purchase Intention

User Engagement to Purchase Intention

User Engagement has a positive influence on Purchase Intention (Jain & Yadav, 2019), this can be seen when customers pay more attention to the information provided by the application (Tian et al., 2021).

User Engagement on the application also increases customer interest in reading notifications and the latest news on the application, customers also feel connected to the application. Human-centric brands have an effect on User Engagement, so that it will affect emotional and online purchase behavior (Suh et al., 2018). Furthermore, the fifth hypothesis is obtained is:
H5: User Engagement has a positive effect on Purchase Intention

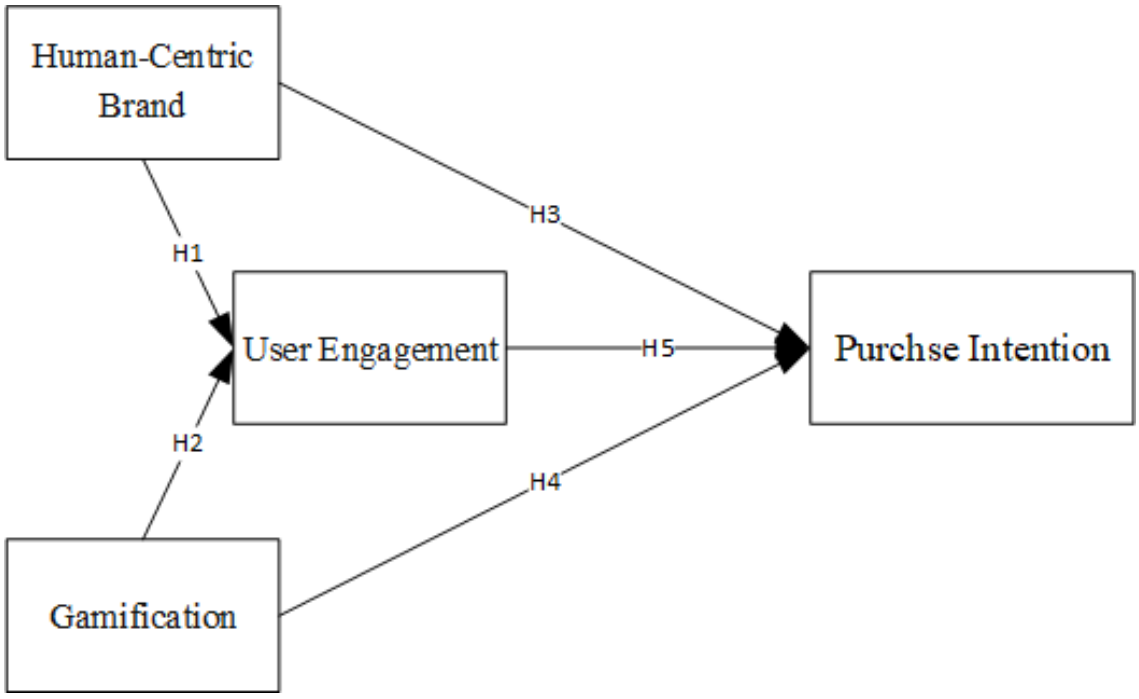

Figure 1. The conceptual research framework

Methodology

The Development of the Research Instrument
User Engagement and Purchase Intention with Human-Centric Brand and Gamification on E-commerce Websites and Mobile Applications are among the instruments of research that have been developed based on previous research findings. Following the receipt of the research instrument, the next step is to conduct an interview with the questioner using a 5-point Likert scale (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, and 5=strongly agree) (Suryani et al., 2021). The questioner gives the answer to the respondent in Indonesian. This is done so that the respondent can easily understand the meaning of the question. Finally, to provide clear information on the types of constructions that were used in this study, the table below was created.
Tabel 1. Construct definition of the conceptual research framework

Construct	Test Item	Construct Definition	Reference
Human-Centric Brand	Nine	Customer perceptions of human-centered design in e-commerce brands	(Kartajaya, H., Kotler, P., & Hooi, 2019), (Jaya et al., 2020)
Gamification	Thirteen	Customer perceptions of Gamification in e-commerce applications	(Xi & Hamari, 2020), (Lu & Ho, 2020), (Suh et al., 2018)
User Engagement	Twelve	Kesediaan client untuk berinteraksi dengan e-commerce aplikasi	(Brien et al., 2020), (Oh et al., 2018), (Masrek et al., 2018)
Purchase Intention	Seven	Customer who is willing to buy a	(Jaya, 2015), (Peña-García et al., 2020),

		specific brand in the future.	(Weismueller et al., 2020)

Sampling

The participants in this study had to be at least 18 years old. The name comes from a number of cities in the Indonesian islands of Java, Sumatra, and Kalimantan. Respondents in this study were chosen from among those who have utilized one of Indonesia's top ten e-commerce websites or applications. We picked ten examples of e-commerce websites and applications in Indonesia for this study.

Table 2. List of E-commerce in Indonesia

	Ecommerce	Visitor
1.	Tokopedia	147.790.000
2.	Shopee	126.996.700
3.	Bukalapak	29.460.000
4.	Lazada	27.670.000
5.	Blibli	18.440.000
6.	Bhinneka	6.996.700
7.	Orami	6.260.000
8.	Ralali	5.123.300
9.	JD ID	3.763.300
10.	Zalora	3.366.700

From the 10 websites, it can be identified the appearance of the website page and mobile application.

Data Collection Procedure

The data collection strategy used in this study was a virtual snowball and convenience sampling method. The final question was created using a Google form. Further, a link questionnaire is sent via instant messaging services such as WhatsApp, Line, and Instagram (Shetty et al., 2021). The survey was conducted from May 2021 to July 2021.

Statistical Analysis Technique

The Structural Equation Model (SEM) with the Partial Least Square (PLS) technique was used in this investigation. Smart PLS was utilized to do the PLS-SEM analysis (Martins et al., 2019). PLS Smart 3.0 Software was utilized to put the method into practice. Structured equation modeling (SEM) based on confirmatory factor analysis was used to analyze causal links and evaluate the measurement model in this investigation. SEM is a sophisticated statistical approach that employs both quantitative and qualitative causal assumptions (Chetioui et al., 2020). The following are the PLS-SEM test criteria:

Table 3. The step of PLS-SEM Analysis

Step of Analysis	Analysis Unit	Basic Threshold	Reference
Measurement model evaluation	Indicator reliability: Indicator loadings	≥0.70	(Chetioui et al., 2020)
	Internal consistency reliability: Composite reliability	0.70-0.90	(Martins et al., 2019)
	Convergent validity: average variance extracted (AVE)	≥0.50	(Chetioui et al., 2020)

	Alpha Cronbach	$\alpha \geq 0.70$	
	Discriminant validity: HTMT	<0.9	(Martins et al., 2019), (Masrek et al., 2018)
Structural model evaluation	*p*-value	$p<0.05$	(Kosadi et al., 2021)
	R2 value	0.75, 0.50, 0.25 (substantial, moderate, weak)	(Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, 2017)
	Q2 value	>0.02 (small); >0.15 (medium); >0.35 (large)	
	f2(effect size)	>0.02 (small); >0.15 (medium); >0.35 (large)	

Results

Overview of the Respondent

The total of 250 questionnaires were distributed online. However, 45 of the questionnaires failed. So that the total questionnaires that can be processed are 205 respondents. Respondents in this study were 205 people, 76 men and 129 women. as many as 80 people are private employees, 109 people are freelancers, lecture 2 people are civil servants 4 people and 10 entrepreneurs. Hypothesis testing use Partially Least Square analysis test, using Smart-PLS 3.0 software.

Table 4. The overview of the respondent

Demographic Overview	Category	Frequency	Percentage (%)
Gender	Male	76	37,07
	Female	129	62,93
Domicile	Jakarta	46	22,44
	Bandung	96	46,83
	Surabaya	28	13,66
	Yogyakarta	9	4,39
	Semarang	9	4,39
	Medan	7	3,41
	Banjarmasin	10	4,88
The most frequently used types of e-commerce applications platform	Website	0	-
	Mobile Application	188	91,71
	Mobile Application & Website	17	8,29

Number of e-commerce applications installed on smartphones	One Application	6	2,93
	Two Application	124	60,49
	Three Application	68	33,17
	Four Application	5	2,44
	More Than Five Application	2	0,98
Job	Not yet working	87	42,44
	Freelancer	15	7,32
	Private sector employee	86	41,95
	Teacher/ Lecturer	2	0,98
	Civil Servant/ State-Owned Enterprise	4	1,95
	Businessman	11	5,37

Reporting Research Results

As shown in Table 4, the measurement model's evaluation focuses on examining the reliability and validity of each component. The indicator loadings values, which reflect indicator reliability, and composite reliability values, which indicate the constructs' internal consistency dependability, were the focus of the constructions' reliability. Table 5 shows that, except for HCB9, the value of all indicator loadings for each construct surpassing the minimal rule of thumb > 0.70. (0.693). Although numerous indicators may have loadings below the 0.70 minimum level, those indicators can still be used for further research because the composite reliability of each construct is adequate (Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, 2017).

Table 5. The summary of the measurement model evaluation

Constructs	Item Code	Item	Loading	α	CR	AVE
Human-Centric Brands	HCB1	I choose e-commerce based on the logo	0,878	0,947	0,955	0,704
	HCB2	I choose e-commerce based on the color	0,890			
	HCB3	I choose e-commerce based on the application design	0,878			
	HCB4	The e-commerce application that I chose provides the products I need	0,899			
	HCB5	I often use the chat feature in e-commerce	0,874			
	HCB6	I was helped by the notification on the e-commerce application	0,853			
	HCB7	I always get a notification if the e-commerce application is crashing	0,773			
	HCB8	I always get compensated if the e-commerce application has an error	0,789			
	HCB9	I often use the donate feature in e-commerce	0,693			

Gamification	GMF1	I often change the profile photo on my e-commerce account	0,745	0,960	0,964	0,676
	GMF2	I often change the profile name on my account	0,838			
	GMF3	I want a feature voice description pad e-commerce	0,811			
	GMF4	i want to get badge on on my e-commerce account	0,825			
	GMF5	I want to get coins that can be exchanged for shopping vouchers	0,851			
	GMF6	I want to earn points when I shop	0,838			
	GMF7	I find it helpful to have a status bar on my package delivery progress	0,790			
	GMF8	I want the customer's activity level to appear on the profile	0,868			
	GMF9	I want the customer ranking to be displayed on the profile	0,857			
	GMF10	I'm feeling excited to get a midnight flash sale	0,782			
	GMF11	I feel challenged to compete to get the product during flash sale	0,847			
	GMF12	I want the application to allow sharing coins or vouchers with other users	0,841			
	GMF13	I love to share my e-commerce profile on social media	0,785			
User Engagement	USE1	I often browse products in e-commerce for a long time	0,798	0,965	0,970	0,726
	USE2	I often search for products in e-commerce applications	0,864			
	USE3	I'm happy to be able to change the background display on an e-commerce application	0,828			
	USE4	I feel that the navigation of the e-commerce application product is good	0,848			
	USE5	I find it easy to find the product I want	0,866			
	USE6	I often remember the product I've been looking for	0,824			
	USE7	I often forget what product to look for	0,806			
	USE8	I'm often too focused when browsing products	0,780			
	USE9	I often mark the product I want to buy	0,905			
	USE10	I will recommend the e-commerce application that I use	0,874			
	USE11	i will make my friends use this app	0,905			
	USE12	I will use this app again	0,918			
Purchase Intention	PUI1	I will buy a product on an e-commerce application	0,874	0,944	0,951	0,736

PUI2	i will buy this product tomorrow on e-commerce app	0,877
PUI3	I will use the products I bought myself on e-commerce applications	0,859
PUI4	I want a tester of products sold on e-commerce applications	0,849
PUI5	I want to directly see the product that I will buy on an e-commerce application	0,799
PUI6	I hope I can shop e-commerce apps tomorrow	0,855
PUI7	I will order the product via e-commerce tomorrow	0,891

Note (s): α = Cronbach Alpha, CR = Composite Reliability, AVE = Average Variance Extracted

As stated in Table 3, Cronbach's Alpha values for all components were greater than 0.7, and composite reliability (CR) and extracted mean variance (AVE) both above the suggested values of 0.7 and 0.5, respectively. The degree to which items differ across constructs is referred to as discriminant validity. Discriminant validity was assessed using Heterotrait-Monotrait criteria. The ratio of correlations within constructs to correlations between constructs is referred to as HTMT. As indicated in Table 4, the HTMT value is more than 0.90, indicating that the model's discriminant validity is compromised. Since this study uses a formative measurement technique for the engagement construct, it is highly necessary to assess the convergent validity by redundancy analysis. However, given the composite reliability and AVE values are in line with the standard, this can be sustained.

Table 6: Heterotrait-Monotrait Criterion for Discriminant Validity

Construct	GMF	HCB	PUI	USE
GMF				
HCB	0,947			
PUI	0,785	0,624		
USE	0,924	0,840	0,843	

HCB = Human-Centric Brands, GMF = Gamification, USE = User Engagement, PUI = Purchase Intention

Structural Model Evaluation

Direct effect Relationship

This research focuses on testing the hypothesis and the applicability of the structural model employed in the current study while evaluating the structural model. The level of importance of the link between variables is determined by evaluating research hypotheses. Table 7 and Figure 2 show, for example, that the p-values of all direct correlations from H1 to H5 are Human-Centric Brands□User Engagement (p>0,01); Gamification □ User Engagement (p<0,01); Human-Centric Brands □Purchase Intention (p<0,01); Gamification □Purchase Intention (p<0,01); User Engagement □ Purchase Intention (p<0,01). In other words, in the current study, all hypotheses are significant except H1.

Table 7. The summary of the direct relationship testing

Hypothesis	Relationship	Path Coefficient (β)	t-value	p-value	Significance
H1	Human-Centric Brands □ User Engagement	0,017	0,171***	0,864	No
H2	Gamification □ User Engagement	0,875	9,958***	0,000	Yes
H3	Human-Centric Brands □ Purchase Intention	0,402	4,251***	0,000	Yes
H4	Gamification□Purchase Intention	0,529	3,956***	0,000	Yes

H5	User Engagement Purchase Intention	0,667	6,374*** 0,000	Yes

Note (s): *t-value 1.65 (Significance level: 10% (p<0.10)), **t-value 1.96 (Significance level: 5% (p<0.05)), ***t-value 2.58 (Significance level: 1% (p<0.01))

In addition, the next discussion observes the effect of the predictor variables on Human-Centric Brands, Gamification and Purchase Intention with reference to the path coefficient value. According to Table 7 and Figure 2, the path coefficients among the five relationships are Human-Centric Brands User Engagement (β=0,017, t=0,171); Gamification User Engagement (β=0,875, t=9,958); Human-Centric Brands Purchase Intention (β=0,402, t=4,251); Gamification Purchase Intention (β=0,529, t=3,956); User Engagement Purchase Intention (β=0,667, t=6,374). Furthermore, the results of the analysis show that all the predictor variables of the five relationships will significantly affect each dependent variable are Human-Centric Brands User Engagement (1.7 percent); Gamification User Engagement (87.5 percent); Human-Centric Brands Purchase Intention (40.2 percent); Gamification Purchase Intention (52.9 percent); User Engagement Purchase Intention (66.7 percent). The most effective association among the predictor variables of the five interactions is the relationship between Gamification and User Engagement, which can be concluded at this point. The association between Human-Centric Brand and User Engagement, on the other hand, has the least impact.

Table 8. Coefficient of determination

Variabel	R^2	Determination
User Engagement	0,794	Substantial
Purchase Intention	0,692	Substantial

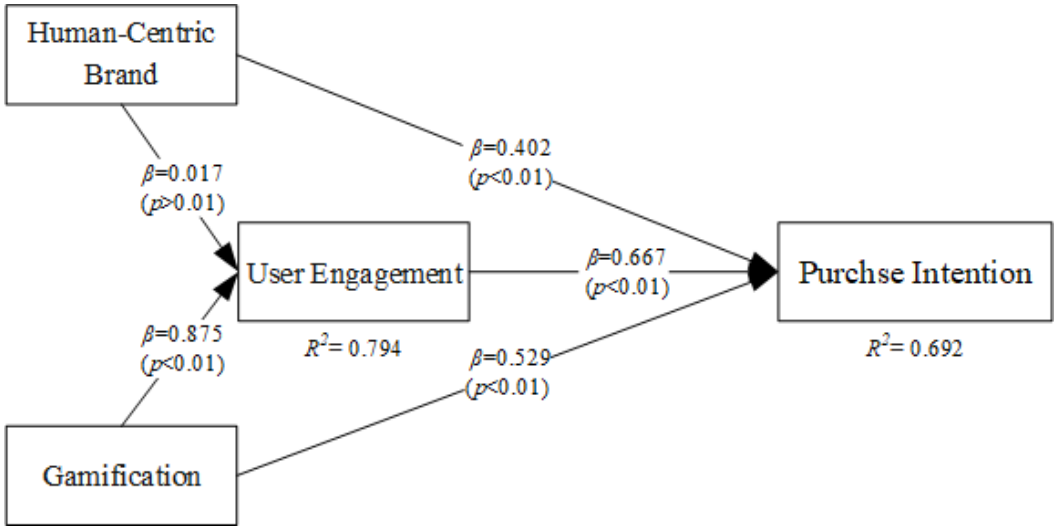

Figure 2. The output of the structural model evaluation

Table 9 provides the basis for this statement. According to the findings from f^2, the association between Human-Centric Brands and User Engagement has no bearing, however the relationship between Gamification and User Engagement has a significant impact. Furthermore, there is a tiny effect between Human-Centric Brands and Purchase Intention, just as there is a little influence between Gamification and Purchase Intention. Finally, there is a medium effect between User Engagement and Purchase Intention.

Tabel 9. Effect Size

Construct Relationship	f^2 (Effect Size) Score	Effect
Human-Centric Brands -> User Engagement	0,000	no effect
Gamification -> User Engagement	0,632	large effect

Human-Centric Brands -> Purchase Intention	0,089	small effect
Gamification ->Purchase Intention	0,095	small effect
User Engagement -> Purchase Intention	0,297	medium effect

Table 9 provides the basis for this statement. According to the findings from f2, the association between Human-Centric Brands and User Engagement has no bearing, however the relationship between Gamification and User Engagement has a significant impact. Furthermore, there is a tiny effect between Human-Centric Brands and Purchase Intention, just as there is a little influence between Gamification and Purchase Intention. Finally, there is a medium effect between User Engagement and Purchase Intention.

Discussion

According to the findings of this study, there is no relationship between Human-Centric Brands and User Engagement. Customers are more drawn to firms that uphold strong social values, according to this finding, which contradicts earlier research (Kartajaya, H., Kotler, P., & Hooi, 2019). As a result, User Engagement has little impact on the deployment of Human-Centric Branding on websites and e-commerce applications. In e-commerce applications, the employment of shapes, colors, and logo designs has little effect on User Engagement. This conclusion differs from research (Jaya et al., 2020) which claims that in the human-centric era, the business has begun to incorporate human values to attract customers. E-commerce companies' product developments have no effect on User Engagement. Morality-related features, such as the app's contribution feature, have little effect on User Engagement. However, in order to maintain a feeling of social ethical obligation, it is hoped that this can still be done (Hirayama, 2019). Human-centric branding, unlike the preceding relationship, has a minor impact on purchase intent. The importance of intellectuality cannot be overstated. Companies can enhance client buy intent by providing innovations to the latest services and goods.

Gamification has a significant impact on websites and e-commerce applications. This is consistent with (Toth & Tovolgyi, 2017). Customers enjoy the goal of a game on the e-commerce application, such as the mystery box they may swap for gift cards. When a customer's membership level is featured on their profile photo, they are pleased. Customers are additionally pleased if the program displays customer rankings over a period. The use of Gamification to influence purchase intent has a minor impact. However, because of this influence, Gamification is a viable option for usage on websites and e-commerce applications, as it will assist customers in achieving their objectives of receiving incentives, vouchers, or prizes that will make them happy. Gamification, as a marketing tool, can improve consumer engagement, enhance product/brand identification, and build customer loyalty, in addition to increasing sales and profit. (Lu & Ho, 2020).

The importance of user interaction in an application cannot be overstated. User Engagement had a moderate effect on purchase intent in this study. The higher the buy intention, the more interactions clients have with e-commerce applications. In e-commerce applications, it will also improve the user experience (Oh et al., 2018). This study also adds to prior studies (Jain & Yadav, 2019) dan (Algharabat, 2018). In e-commerce apps, the presence of a bookmark feature is critical. Customers frequently utilize the bookmark option to save things for later purchase. Customers will be more likely to use e-commerce applications if the application layout is appealing. Customers will be far more likely to find the product they want to buy later if you have a good search option. Customers will be able to access products and information with ease because to the simple navigation. Purchase Intention will rise as user interaction rises. As a result, the customer's stages toward making a purchasing decision are increasing.

Conclusion

This study's main goal of Purchase Intention yielded positive findings. Customers are expected to have at least seven desires for a product: customers are interested in making purchases, customers want to make purchases later, customers want to use the product, customers want to try the product, customers want to see the product in front of them, desire to have, and desire to place an order for the product. This study's main goal of Purchase Intention yielded positive findings. Customers are interested

in making purchases of products, customers want to make purchases later, customers want to use the product, customers want to try the product, customers want to see the product in front of them, customers want to see the product in front of them, customers want to see the product in front of them, customers want to see the product in front of them, customers want to see the product in front of them, customers want to see the product in front of them, customers want to see the product A strong urge to (Martins et al., 2019).

Gamification has a significant result on Purchase Intention. The existence of these results further strengthens that the interaction between the customer and the application can increase Purchase Intention. Positive results are obtained when the interaction is carried out in a pleasant way. The frequency of interaction plays an important role in creating good feelings. Gamification has a significant and highest result than other research hypotheses. The right interaction, the frequency of using the appropriate application will lead to high User Engagement. Therefore, interaction is very important to increase Purchase Intention and User Engagement. Human-centric brands partially have negative and statistically significant results on Purchase Intention. Of course, this is quite surprising because simultaneously Human-Centric Brand, Gamification and User Engagement have a significant effect. Meanwhile, Human-centric brands have a positive and no statistically significant effect on User Engagement. The use of interactions with emotionality and cognitive approaches, does not always work. However, from these results there is a need for a deeper approach to the psychological effects of applying Human-Centric Brand on User Engagement. User Engagement on Purchase Intention has positive results. This is also in line with previous research which mostly had positive results. The results of this study are generally in line with expectations, namely Human-centric brand, Gamification influences User Engagement and Purchase Intention. With this research, hopefully it can help e-commerce entrepreneurs to compete to increase visits to their websites and mobile applications. For further research, it is hoped that these four research variables will be able to develop to create high-tech but high-touch technology.

Limitation

This study was conducted in Indonesia. In other countries, other outcomes may occur. Various sampling procedures can be employed to ensure that the results obtained are in line with the research objectives. Each country has its own characteristics in terms of demography, culture, and religion. The results of this study may differ due to differences in people's habits, education levels, and occupations. To validate the current findings, future researchers plan to duplicate the current research model with a larger sample size and a broader geographic area. Because the growth of e-commerce technology and government rules can alter at any time, e-commerce research must continue.

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The Influence Of Human Resources Quality On Financial Statements Of National Amil Zakat Agency Of Cianjur Regency

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Abstract
This research aims to find out the influence of the quality of human resources on the quality of financial statements of the National Amil Zakat Agency of Cianjur Regency. The first problem of the National Amil Zakat Agency of Cianjur Regency is that human resources have not fully mastered accounting in accordance with Financial Accounting Standards No. 109 and 101. Second, the educational background that has not been in accordance with the role in financial management in the National Amil Zakat Agency of Cianjur Regency. The data used is primary data. Data collection by field research and literature research and the dissemination of questionnaires to 50 respondents and using purposive sampling. Methods of measuring the amount of variable influences are used in classical assumption test analysis, correlation coefficient analysis, determination and hypothesis testing. The results showed that human resource quality had a positive and significant relationship to the quality of financial statements with a relationship rate of 55.1%, and human resource quality had an influence on the quality of financial statements by 30.4% while the remaining 69.6% was influenced by other factors not studied by the authors.
Keywords: Quality, Human Resources, Financial Statements
JEL Classification: M4

Introduction

The National Amil Zakat Agency is a non-structural government institution that is independent and responsible to the President of the Republic of Indonesia through the Minister of Religious Affairs. Law No. 23 (2011) regulates the Management of Zakat and Zakat Collection Units must submit a report to the National Amil Zakat Agency every month, Six months, and the end of the year in accordance with its level. The National Amil Zakat Agency must have good technical personnel in accounting and finance. The National Amil Zakat Agency continues to look for quality human resources and the National Amil Zakat Agency must always prepare adequate human resources both from the amount and quality in compiling financial statements. Most importantly, the financial statements of the National Amil Zakat Agency must be in accordance with the rules of financial and Shariah. (Republika.co.id)

From 37 respondents, a description was obtained that was divided on the basis of gender, age of respondents, education level and working period in the National Amil Zakat Agency of Cianjur Regency. Based on data, respondents by gender, most are male
28 people (70.3%) while female respondents are 11 people (29.7%). By age of respondents, the average age is between 20-35, this is seen from the large percentage for ages between 20 - 35 which is 54.5%, from the level of education the majority comes from Bachelor (68%). This means showing the mindset of the financial manager is quite enough to be able to perform the task as a financial manager with the ability and skills he has in accordance with the level of education he has. Furthermore, from the high school level are 2 people (5%), level Diploma and Master each are 5 people (13.5%). Based on the working period, respondents who have a working period of under 1 year there are 4 people, respondents who work for 1-5 years there are 20 people, and respondents who work for 6-10 years there are 10 people and respondents who work more than 10 years there are 3 people.

So, it can be concluded that the average respondent has worked between 1-5 years. This means showing that respondents are considered quite experienced in terms of financial management, and can be said to have been able to understand the financial management system based on applicable standards.

Based on the data above can show respondents already have a high enough level of education and have not enough work experience. In this case it is already visible from the percentage of respondents, so it is expected that the statement answered by the respondent can describe something of actual circumstances.

In this study, respondents were asked questions about accounting education and training. Based on the observation results, the problems in the National Amil Zakat Agency of Cianjur Regency are (1) education in accounting is lacking, (2) they don't have a training certificate and (3) there are still those who have never participated in training in accounting. Education and training in accounting are indispensable to improve the quality of financial statements better and reliably.

Literature Review

Financial Statements

Financial reports are the results of the accounting stages that can be used as a tool to communicate between financial data or activities of an organization/institution and parties with an interest in the data or activities of the organization/institution. (Munawir: 1999: 55)

Financial report is one of financial reporting. The completeness of a financial report includes a balance sheet, a statement of changes in capital, and an income statement. other reports/Notes such as the effect of price changes as well as geographic and financial industry segments. (SAK, 2016)

Based on the definition described above, the author can formulate that the quality of financial reports is a series of processes that involve all aspects, which ultimately provide reports and information about the achievements and quality of organizations/agencies in carrying out their business activities to achieve profits or profits.

Quality of Financial Statements

The elements contained in the quality of financial statements can be distinguished between conventional and Sharia. The differences in these elements can be distinguished in the following table:

Table 1 Differences of Financial Statements Quality Assessment

Elements of Quality Assessment of Conventional Financial Statements	**Elements of Quality Assessment of Islamic Financial Statements**
Statement of Financial Position (Balance Sheet)	Statement of Financial Position (Balance Sheet)
Income Statement	Income Statement
Cash Flow Statement	Cash Flow Statement
Equity Change Report	Equity Change Report
Financial Statement Notes	1. Source Report and Use of Zakat funds 2. Source report and use of welfare funds 3. Special reports reflecting the activities of sharia entities 4. Financial Statement Notes

Referring to the measurement standards put forward by the Indonesian Accounting Association (IAI)

mentioned that the quality of financial statements is:

1. provide information related to the financial position, quality, and changes in the financial position of an institution / organization that is beneficial to a large number of users / users in economic decision making;
2. Preparing financial statements aims to meet the common needs of most users/ users, thus financial statements do not provide all the information that may be needed by the user / user in decision making.

Human Resources

Human Resources are people who work and function as organizational/company assets that can be counted (quantitatively), and HR is the potential that drives the organization. (Achmad, 2007:217)**.** Human Resources are the only resources that have feelings, desires, skills, knowledge, encouragement, power, and work (ratio, taste, and intention). All of these potential human resources affect the organization in achieving its goals. (Nawawi, 2014: 44)**.** Human Resources is a unit of human energy in an organization or institution and is not just a sum of existing employees. As a unit, HR must be viewed as a system in which every employee functions to achieve organizational or institutional goals. HR can be measured based on the educational background obtained by the employee/employee. (Matindas, 2002)**.** From the above understanding it can be concluded that human resources are the most important asset in an organization that can be measured based on educational background that can help the organization to operate and achieve an organizational/company goal.

Quality of Human Resources

The quality of human resources is related to the quality of human resources and capabilities, both physical and non-physical abilities. The quality of human resources involves two aspects, namely the first physical aspect (physical quality) and the second non-physical aspect (non-physical quality) which concerns the ability to work, have skills and think. Therefore, efforts to improve physical quality can be pursued through nutrition and health programs. Meanwhile, to improve the quality or non-physical abilities, efforts are made in the form of increasing education and training. This effort is intended to develop better human resources.(Soekidjo, 2003)

Human resource quality development, namely human development efforts involving the development of activities in the fields of education, training, nutrition and health. This definition is the focus of attention on equity in the utilization of abilities and increasing human abilities. (Sein, 2009)

Human resource is one of the resources contained in the organization / institution including all people who carry out activities. In general, the resources contained in the organization can be grouped into two types, namely the first Human Resources, and the second Non-Human Resources. Included in this group of non-human resources include machines, technology, capital, materials, and so on. (Faustino, 1995)

Human resource is the only resource that has the ability, skill, knowledge, reason, feeling, desire, drive, power and work. The only resource that has taste, intention and ratio. All potential human resources are very influential on the organization's efforts in achieving its goals. Regardless of the availability of capital, advances in technology, development of information and adequate materials, if there are no human resources it will be difficult for organizations/institutions to achieve their goals. No matter how good the plan of the organization/institution and the formulation of goals seems to be in vain,

if the human resource element is not considered, especially if it is neglected it will be bad for the organization/institution. (Gomes. 1995:2)

The quality of work refers to the quality of human resources, below is the quality of work that makes the benchmark of quality: (Matutina, 2011)

1. Knowledge is the power that employees have that is more oriented to mastery and thinking power and knowledge that is widely owned by employees.
2. Skill is the mastery and operational technical ability in a field owned by a particular employee.
3. Abilities are abilities that include discipline, loyalty, responsibility and cooperation in order to form the competence of a number of employees.

Research on the issue of the quality of financial statements has been done by many other researchers. Research conducted by Nurlis and Winwin Yadiati, 2017 with the title "The Influence of Internal Control Effectiveness, Information Technology Utilization and Human Resources Competence on Local Government Financial Reporting Quality", (Survey on SKPD Banten Provincial Government and Serang City), The results showed that human resource competence has a positive effect on the Quality of Financial Reporting.

Muliani's research with the title "The Influence of Human Resource Quality and Internal Control System on the Quality of Local Government Financial Statements", (Bandung: Universitas Komputer Indonesia, 2015) The results showed that the quality of human resources exerts a positive and significant influence on the quality of local government financial statements at the Regional Financial and Asset Management Office (DPKAD).

Fadhilla Husna and Muliani's research has also been conducted by Ni Ketut Rusmiadi Putri, et al with the title "Influence of Human Resource Quality in Accounting and Internal Control System on The Quality of Financial Statements of Studies on Saving and Borrowing Cooperatives in Buleleng Subregency", (Singaraja: Universitas Pendidikan Ganesha, 2015). The results showed that: The quality of human resources has a positive influence on the quality of financial statements.

Other research was conducted by Fadhilla Husna under the title "Influence of Human Resource Quality, Financial Supervision, and Government Internal Control System on The Value of Government Financial Reporting", (Padang Panjang: Universitas Negeri Padang, 2013). The results showed that there was no significant influence on the quality of human resources on the value of regional financial reporting information. Further research was also conducted by Ismi Desintha Putri, 2015 with the title "Influence of Human Resource Quality, Understanding of Accrual-Based Accounting Standard Regulation, Internal Control System and Application of Regional Financial Management System to Financial Statement Quality", Show That the quality of human resources has no influence on the quality of financial statements.

Methods

In this study the data analysis technique used is quantitative analysis. Quantitative analysis is done by analyzing a problem that is realized quantitatively. In this study, quantitative analysis is done by quantifying research data so as to produce the information needed in the analysis. According to Sugiyono (2017:13) defines quantitative research methods as follows: "Quantitative research methods can be interpreted as research methods based on the philosophy of positivisme, used to examine a particular population or sample, data collection using research instruments, quantitative / statistical data analysis, with the aim of testing a predetermined hypothesis". In conducting this research, the research approach used is by descriptive and verification methods. According to Moch. Nazir (2013:54) states that: “Descriptive methods are methods of examining the status of a human group, an object, a condition, a system of thought, or an event in the present. The purpose of this descriptive research is to create a systematic, factual and accurate description, description, description or painting of the facts, properties and relationships between the phenomena investigated."

Population

Population is a generalization area consisting of subjects or objects that have certain qualities and characteristics set by researchers to be studied and drawn conclusions. So, the population is not just humans but other natural objects or objects. Population is a group of events, people, or everything that has a certain characteristic. The population in this study consisted of 50 employees at the National Amil Zakat Agency of Cianjur Regency.

Data Collection Techniques

Data collection techniques are a basic step in research as a standard and systematic procedure for obtaining the data required in research. The author obtained the data using data collection techniques namely:

1. Field Research observation is a technique of collecting data by directly observing the problems studied.
2. Questionnaires, which are data collection techniques in the form of distributed questionnaires. The data used in this study was to distribute questionnaires to employees at the National Amil Zakat Agency of Cianjur Regency.
3. Documentary, which is a method used to track historical data. The data used in this study is to collect the necessary material in the form of documents contained in the National Amil Zakat Agency of Cianjur Regency.
4. Interviews, which are techniques of collecting data by Q&A method with banks to obtain information directly related to the problem being studied.

RESULTS

1. Calculation of Financial Statement Quality Variable Value

Table 2 Calculation of Contingent Line *Values* Financial Statement Quality Variables

Information	Formula	Account	Result
Maximum Index Value	Highest score x number of statement items x number of respondents	= 1 x 10 x 50	500
Minimum Index Value	Lowest score x number of statement items x number of respondents	= 5 x 10 x 50	2500
Range	Maximum Value - Minimum Value	= 2500 - 500	2000
Interval Distance	Range: Level	2000: 5	400
Percentage Score	(Total Score: maximum value) x 100%	= (1976: 2500) x 100%	79.04 %

Thus, based on the calculations in the table above, it can be shown *the contingent* line in the figure below:

Figure 1 Contingent Line Variable Quality of Financial Statements

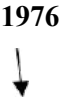
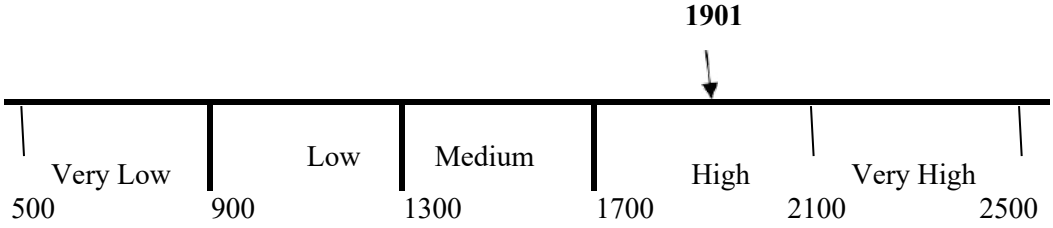


Table 3 Calculation of Contingent Line *Values* Human Resource Quality Variables

Information	Formula	Account	Result
Maximum Index Value	Highest score x number of statement items x number of respondents	= 1 x 10 x 50	500
Minimum Index Value	Lowest score x number of statement items x number of respondents	= 5 x 10 x 50	2500
Range	Maximum Value - Minimum Value	= 2500 - 500	2000
Interval Distance	Range: Level	2000: 5	400
Percentage Score	(Total Score: maximum value) x 100%	= (1901: 2500) x 100%	76.04 %

Thus, based on the calculations in the table above, it can be shown *the contingent* line in the figure below:

Figure 2 Continuous Line of Human Source Quality



To determine the categorization of human resource quality variables, first calculated the total human resource quality score is 1901 in figure 2 located in intervals 1700 - 2100. It can be said that the human resource quality variable termasuk into a good category. This study reveals that the quality of human resources offered to respondents is felt to be high.

Verifiable Analysis

1. Effect of Human Resource Variables on Financial Statement Quality Variables The Effect of Human Resources Quality on the Financial Statement Quality is seen from the "*T Test* "below.

Table 4 Result Tcount
Coefficients[a]

Type		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	25.559	3.098		8.249	.000
	Quality of Human Resources	.367	.080	.551	4.579	.000

a. Dependent Variable: Quality of Financial Statements

Hypothesis testing results obtained that the tcount value for Human Resource Quality is 4,579 and ttable is 2.01 with a significant rate of 0.001 which is smaller than 0.05. Because the value of tcount > ttable with (α) < 0.05, then H0 is rejected, meaning that the Quality of Human Resources has a positive and significant effect on the Quality of Financial Statements.

The Amount of Influence of Human Resource Quality on Financial Statement Quality can be seen from the data below

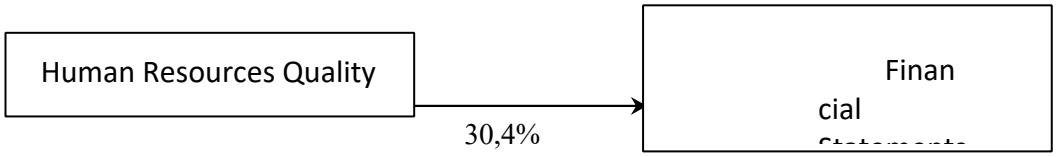
Table 5 Model Summary[b]

Type	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.551[a]	.304	.290	3.917

a. Predictors: (Constant), Quality of Human Resources
b. Dependent Variable: Quality of Financial Statements
Source: processed data

Based on the data obtained the value of the Influence of Human Resource Quality on Financial Statements Quality is 0.304 or (30.4%).

Figure 3 Coefficient of Determination of The Influence of Human Resource Quality against the Financial Statements Quality



Independent Variable Relationship Rate to Dependent Variables

The research hypothesis of this correlation is that there is a significant relationship between Human Resource Quality and Financial Report Quality, as can be seen from the data below.

Table 6 Correlation Test

Correlations

		Quality of Human Resources	Quality of Financial Statements
Quality of Human Resources	Pearson Correlation	1	.551**
	Sig. (2-tailed)		.000
	N	50	50
Quality of Financial Statements	Pearson Correlation	.551**	1
	Sig. (2-tailed)	.000	
	N	50	50

**. Correlation is significant at the 0.01 level (2-tailed).

Source: (Processed Data)

Based on the results of correlation testing it was obtained that the spearman correlation value is 0.551, with a sig value of 0.000 smaller than the alpha value of 0.05 thus it can be concluded that there is a significant relationship between Human Resource Quality and Financial Statement Quality with a correlation value is 0.551 or 55.1%.

Discussion

The results of this study aim to find out how much influence the quality of human resources on the quality of financial statements in the National Amil Zakat Agency of Cianjur Regency, as well as strengthen the concepts and theories put forward by Mardiasmo who state that the quality of financial statements is influenced by human resources, according to him, human resources have a significant positive influence in improving the quality of financial statements.

The results of this study can also strengthen the theory put forward by Dadang Suwanda in his book that quality human resources can also save time making financial statements, because these human resources already know and understand what will be done well so that the presentation of financial statements can be timely. The faster the time of presentation of financial statements, the better for decision making.

The results of the study are in accordance with the results of research conducted by Nurlis and Winwin Yadiati with the title "The Influence of Internal Control Effectiveness, Information

Technology Utilization and Human Resources Competence on Local Government Financial Reporting Quality", (Survey on SKPD Banten Provincial Government and Serang City) and also Muliani's research with the title "Influence of Human Resource Quality and Internal Control System on the Quality of Government Financial Statements", (Bandung: Universitas Komputer Indonesia, 2015) which shows that the quality of human resources has a positive and significant influence on the quality of financial statements.

The results of this study do not give a full view that quality human resources can affect financial statements, this is because there are many factors that can more affect the quality of financial statements in the National Amil Zakat Agency, this can also be caused by advances in science and technology in terms of improving quality, so human resources are included in the main part to improve the quality of financial statements.

Conclusion

The quality of human resources of the National Amil Zakat Agency of Cianjur Regency is in the high category. This can be seen from respondents' responses to all statements regarding the quality of human resources showing the level of conformity of reality and expectations with a score of 1901 (76.04%) located between the range of 1700
- 2100. This shows that the existing human resources of the Amil Zakat Agency of Cianjur Regency are in accordance with the qualifications set by the company.

1. The quality of the Financial Statement of National Amil Zakat of Cianjur Regency is in the high category. This can be seen from the respondent's response to all statements regarding the effectiveness of internal control showing the level of conformity of reality and expectations with a score of 1976 (79.04%) located between the range of 1700-2100. This shows the quality of the financial statements of the National Amil Zakat Agency of Cianjur Regency is in accordance with the expectations expected by the company.
2. Based on the results of research on the t test, the quality of human resources has a significant influence on the quality of financial statements in the National Amil Zakat Agency of Cianjur Regency. The assessment is obtained from tcount 4,579 > ttable 2,01.
3. Based on the results of the correlation test study, the relationship of human resource quality with the quality of financial statements in the National Amil Zakat Agency of Cianjur Regency is 55.1%. This shows that there is a positive significant relationship between the quality of human resources and the quality of financial statements in the National Amil Zakat Agency of Cianjur Regency, meaning that if the quality of human resources increases, then the quality of financial statements in the National Amil Zakat Agency of Cianjur Regency will increase or vice versa.
4. Based on the results of research on determination testing, the quality of human resources affects the quality of financial statements in the National Amil Zakat Agency of Cianjur Regency by 30.4% while the remaining 69.6% is influenced by other factors that are not studied by the author.

Limitation

This research is inseparable from a number of limitations known through observations along the course of the study. The weaknesses felt by researchers need to be expressed for the perfection of subsequent research in the same language.

Sampling research by involving all employees in each Zakat Collection Unit in the National Amil Zakat Agency of Cianjur Regency, although in this research, researcher only collect data from one regency because of limitation of resource, so it cannot be generalized to all The National Amil Zakat Agency in Indonesia.

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Consumer Purchase Decision Analysis in Pandemic Era (study on hand sanitizer product)

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Abstract
The purchase of hand sanitizer products in the current era of the coronavirus outbreak is determined more by consumer perception factors that are influenced by brands, prices, and promotional activities that provide confidence in consumers when making purchasing decisions. This study aims to determine the effect of Brand Knowledge, Price, and Sales Promotion on consumer purchasing decisions hand sanitizer product. This study uses quantitative research methods. Data was collected by distributing online questionnaires to 100 respondents at random. The data analysis used multiple regression analysis. The results showed that Brand Knowledge (BK) and Price (P) partially did not affect Purchase Decisions (PD). However, Sales Promotion (SP) has a partial effect on Purchase Decision (PD) hand sanitizer products. The correlation coefficient (R) shows that there is a correlation of each independent variable to the purchasing decision variable, namely 0.633 for brand knowledge; 0.538 for the price, and; 0.473 for sales promotion. This shows that there is a strong correlation between brand knowledge and price on purchasing decisions and a moderate correlation between sales promotions and purchasing decisions. The value of the coefficient of determination (R Square) is 0.661, which means that purchasing decisions are influenced by changes in Brand Knowledge, Price, and Sales Promotion by 66.1%. This condition indicates that other factors can increase Purchase Decisions hand sanitizer products other than Brand Knowledge, Price and Sales Promotion variables, which are 33.9%.
Keywords: **Brand knowledge, Price, Sales Promotion, Purchase Decision, Hand sanitizer.**
JEL Classification: M31
The authors should add 1- 3 JEL Classification Numbers. Information guide for the Journal of Economic Literature (JEL) can be found at https://www.aeaweb.org/jel/guide/jel.php

Introduction

The purchase decision is a description of the consumer's choice of a product. This stage can be regarded as a form of consumer response based on the results of considerations when searching for information and evaluating alternatives that are tailored to the motivation to meet the needs and desires of the product(Kotler & Keller, 2012; Purwianti & Suryani, 2021). This condition explains the functional and rational connotations. However, many consumer purchasing decisions involve feelings or emotions associated with acquiring or using a brand or with the situation in which the product is purchased or used (Oh et al., 2016). Consumers need to search for, collect and understand much information about products when making decisions.

A purchase decision will not be taken if a consumer does not have any knowledge regarding the desired product or brand (Hashemi et al., 2016). This explains that brand knowledge will determine product choice or brand choice. According to (Kotler & Armstrong, 2017), brand knowledge is consumer awareness of brands and associations that exist in consumers' minds, whether they realize it or not, will be stored as key information that can be developed into strength and brand compliance.

The attitude of consumers in making purchasing decisions is also determined by the presence of information on the price of a product (Pandey et al., 2021). Price as a reflection of the benefits that consumers get after exchanging them for a certain amount of money is one of the factors that can help consumers when choosing and buying a product or brand. Attractive pricing can encourage consumers to make purchases (Steven et al., 2021)

In addition, consumer purchasing decisions are influenced by how consumers respond to promotional activities carried out by marketers (Kotler & Keller, 2016). Short-term promotional activities that

provide incentives to customers are also called sales promotions. This promotional activity can encourage consumers to purchase a product because sales promotions provide direct stimulation to consumers and consumers can feel the direct benefits of sales promotions (Sanusi, 2021).
At the beginning of 2020, when the Coronavirus spread, a unique phenomenon related to consumer behavior emerged. Inventure Knowledge (2020) mentions this condition with the term mega shift consumer behavior. One form of behavioral shift that occurs is back to the bottom of the pyramid which explains that during the pandemic era consumers will prioritize purchasing products to meet physiological and safety needs. The description of the shift in consumer behavior can be seen from the increase in demand for products that can support a healthy lifestyle or are often referred to as adopting new habits. According to Sirclo (2020) in inet.detik.com, it is known that hand sanitizer products are products that are widely purchased by consumers in addition to masks and other health support products. The choice of hand sanitizer products based on brands and prices that are widely offered in the market during the pandemic era, makes consumers have to make purchasing decisions to get these products. In addition, the incessant marketing campaigns that provide benefits for consumers encourage them to be more careful in making purchasing decisions. Therefore, this study aims to determine and analyze consumer purchasing decisions for hand sanitizer products during the pandemic era. The results of the study are expected to provide information for all parties, especially those who carry out marketing programs, especially in the era of the COVID-19 pandemic.

Literature Review

Purchase Decision

Purchase Decision (PD) is one of the stages in the buying decision process before post-purchase behavior. In entering the previous purchase decision stage, consumers have been faced with several choices. At this stage, consumers will take action to decide to buy products based on the choices specified (Kotler & Keller, 2012). (Purwianti & Suryani, 2021)) mentioned that the purchase decision is a consumer decision that is influenced by the financial economy, technology, politics, culture, product, price, location, promotion, physical evidence, people, and process. Based on this, purchasing decisions can be said as a form of an attitude on consumers to process all information and draw conclusions in the form of responses that appear what products to buy. (Kim & Yoon, 2021) argues that purchasing decisions are a process of assessing and selecting from various alternatives following certain interests by determining an option that is considered the most profitable. Meanwhile, (Kotler & Armstrong, 2017) state that purchasing decisions are the selection of various products and determining one product that is considered the most suitable, based on the brand that is most appropriate with emotional factors and positive associations, the frequency of consumer purchases in a certain period and a certain amount. as well as the payment method used by consumers when buying a product. Based on this description, it can be said that there are different perspectives regarding purchasing decisions. The first perspective states that the purchase decision is the outcome of several marketing stimuli, the next opinion states that the purchase decision is a stage where the product chosen is the result of consumer thinking that is most in line with consumer desires. However, the last opinion states that purchasing decisions are actions taken by consumers based on product, brand, time, amount, and method of payment. In this study, researchers used the concept of purchasing decisions based on the third perspective.

Brand Knowledge

A brand is a name, term, symbol, design, or a combination of them, which identifies the product or service of one seller or group of sellers that distinguishes it from competitors (Kotler & Armstrong, 2017). A strong brand will certainly be a distinct advantage for the company. Building a strong brand is a way of building loyalty value for customers, thereby encouraging them to make purchases (Kotler & Keller, 2016). (Afshar, 2021) mention that Brand Knowledge (BK) is the presence of information about brands in consumers' memories, along with associations related to the brand. Meanwhile, (Kotler & Keller, 2016) state that brand knowledge is the totality of assumptions, feelings, images, experiences, beliefs, and so on related to brands. However, (Terms, 2016) argues that brand knowledge is information about unique product brand attributes and provides benefits to consumers. Based on this, brand knowledge can be said as information on the existence of a brand that is stored in consumers' memories, which will be traced when consumers are dealing with a product and will then be evaluated based on

perceptions, experiences, beliefs about the brand. Therefore, the study uses all the previously mentioned brand knowledge perspectives (Tooraj Sadeghi, 2011).

Price

Price (P) is one of the most important elements in determining the market share and profits of a company and the only element of the marketing mix that generates revenue or revenue for the company. (Kotler & Keller, 2016) explain that price is an element of the marketing mix that is flexible, meaning that it can be changed quickly according to market conditions. (Kotler & Armstrong, 2017) mentions the price the amount of money charged for a product or service, or the sum of the value that customers exchange for the benefits of having or using the product or service. (De Toni et al., 2021) states that price is a consumer consideration in comparing and evaluating whether it is appropriate or not with the value of the product and the amount of money that must be spent. There is no different concept about price from each reference obtained so in this study the price measurement is based on a description of the amount of money exchanged to get an affordable product, which is following the benefits and quality and can be distinguished from competitors.

Sales Promotions

The role of promotion is to convey information to the target market about the benefits and advantages of a product. Promotional activities can influence perceptions and persuade the target market to use the products or services offered. One of the promotional activities carried out by marketers is Sales Promotions (SP). According to (Kotler & Keller, 2016), Sales Promotion is a key element in marketing campaigns, consisting of a collection of incentive tools, most of which are short-term in nature, designed to stimulate faster or more rapid purchase of certain products or services by consumers or traders. Meanwhile, (Kotler & Armstrong, 2017) suggest that sales promotion consists of short-term incentives to encourage the purchase or sale of products or services. (Suryani & Syafarudin, 2021) states that sales promotion is a short-term sales activity and is not carried out repeatedly and not routinely, which is intended to encourage the stronger acceleration of different market responses. Based on this, this study uses the concept of sales promotion mentioned above stating that sales promotion is a form of short-term incentives for customers that aims to encourage purchases or sales. The short-term incentives consist of samples, coupons, price packs, and premiums.

Methods

The research sample was 100 people taken from the population of hand sanitizer users. The sampling method used a probability sampling technique which was taken randomly. The complete overview of respondents is presented in the following Table 1.

Table 1. Respondent profile

Respondent profile	Descriptions	%
Gender	Male	21
	Female	79
		100
Age	16 – 20	22
	21 – 25	35
	26 – 30	21
	31 – 35	12
	>35	10
		100
Frequent use product each day	1 – 3	18
	4 – 6	27
	>6	55
		100
Brand choice	Lifebuoy	33
	Dettol	23
	Antis	17
	Eskullin	13

	Others	14
		100
Reason choose hand sanitizer	Price	45
	Sales promotion	21
	Brand	18
	Packaging	10
	Aromatic	6
		100

Based on the data in Table 1, it is known that the respondents of hand sanitizer products are dominated by female consumers, with an age range ranging from 16 years who use hand sanitizer every day an average of 3 times. The choice of hand sanitizer brand is based on their level of knowledge about the product. Reasons for purchasing hand sanitizer products are price, sales promotion, brand knowledge, packaging, and aromatics. Data was collected using a questionnaire online (link: https://forms.gle/sKWmymLhNo2SJmDR8) with the consideration that during the research there was the implementation of PPKM to prevent the spread of the Coronavirus, especially in the city of Bandung. The results of testing the validity and reliability of the research instrument are presented in full in Tables 2 - 3. The validity test was carried out using the Pearson Product Moment correlation technique. The criteria in the validity test are declared valid if the results of *r count* > *r table*. Based on the number of research samples as many as 100 people; α =5%, then r table = 0.195. The results of the validity test are detailed in Table 2.

Table 2. Validity Test

Variable	**Item**	**r count**	**r table**	**Sign <0.05**	**description**
Purchase Decisions (PD)	PD_1	1	0.195	0,000	Valid
	PD_2	.298	0.195	0,003	Valid
	PD_3	.373	0.195	0,000	Valid
	PD_4	.199	.0.195	0,045	Valid
	PD_5	.329	0.195	0,001	Valid
Brand Knowledge (BK)	BK_1	.342	0.195	0,000	Valid
	BK_2	.284	0.195	0,004	Valid
	BK-3	.261	0.195	0,009	Valid
	BK_4	.263	0.195	0,008	Valid
Price (P)	P_1	.344	0.195	0,000	Valid
	P_2	.401	0.195	0,000	Valid
	P_3	.389	0.195	0,000	Valid
	P_4	.455	0.195	0,000	Valid
Sales Promotion (SP)	SP_1	.417	0.195	0,000	Valid
	SP_2	.305	0.195	0,002	Valid
	SP_3	.428	0.195	0,000	Valid
	SP_4	.264	0.195	0,008	Valid
	SP_5	.447	0.195	0,000	Valid

Reliability test using Cronbach's Alpha where an instrument can be said to be reliable if Cronbach's Alpha value is greater than 0.600 on the contrary if Cronbach's Alpha value is less than 0.600 it is said to be unreliable. Completely the results of the reliability calculation are presented in Table

Table 3. Reliability Test

Variable	*Alpha Cronbach's*	Criteria	Description
Purchase Decision (PD)	0,739	0.6	*Reliable*
Brand Knowledge (BK)	0,876	0.6	*Reliable*
Price (P)	0,919	0.6	*Reliable*
Sales Promotion (SP)	0,861	0.6	*Reliable*

Data analysis using multiple linear regression, with the research model as follows:

$Y = a + b_1BK + b_2P + b_3SP + e$

Y = Purchase Decision
a = Constant Number
b1b2b3 = Coefficient/line direction
BK = Brand Knowledge
P = Price
SP = Sales Promotion
e = Error

Results

This research was conducted on 100 respondents using hand sanitizer products. Data were collected, using a questionnaire by asking 18 questions related to purchasing decisions, brand knowledge, price, and sales promotion. In line with the research objective to identify and analyze consumer purchasing decisions on hand sanitizer products in the pandemic era, researchers conducted descriptive and verification analyzes, which were expected to be able to provide answers related to research problems. Descriptive analysis aims to determine the responses of each respondent, regarding purchasing decisions, brand knowledge, prices, and sales promotions. The results of respondents' responses are descriptively presented in Table 4.

Table 4. Respondent descriptive response

Variable	**Item**	**Score**
Purchase Decisions (PD)	PD_1	436
	PD_2	406
	PD_3	403
	PD_4	436
	PD_5	408
Average		416,6
Brand Knowledge (BK)	BK_1	381
	BK_2	369
	BK-3	348
	BK_4	372
Average		367,5
Price (P)	P_1	384
	P_2	387
	P_3	388

	P_4	407
Average		391,5
Sales Promotion (SP)	SP_1	406
	SP_2	411
	SP_3	403
	SP_4	408
	SP_5	409
Average		407,4

Table 4. shows that previous consumer purchasing decisions have been faced with several choices. At this stage, the consumer decides to buy the product based on the choices made. This condition can be seen from the average purchasing decision variable score of 416.6 which shows consumers can make good purchasing decisions when they choose, buy and use hand sanitizer products. The brand as the identity of the product becomes its strength for the company to market its products. The existence of hand sanitizer brands in the market helps consumers identify and recognize certain products, then make decisions to buy, consume, or not the product. This condition can be seen from the average brand knowledge variable score of 367.5 (Table.4) which shows consumers can identify and recognize the brands of hand sanitizer products offered by marketers. Price is the value created by marketers to describe the quality and benefits of a product that can be consumed by consumers at an affordable price. The hand sanitizer products offered to consumers have various prices, but consumers can find out the quality and benefits of these products based on the prices set by the marketers. This condition can be seen from the average score of the price variable of 391.5 (Table.4) which indicates that the price of hand sanitizer products offered to consumers by marketers meets the criteria of affordability, suitability of benefits, and quality as well as the competitiveness. Sales promotion is a key element in a marketing campaign, consisting of short-term incentives to encourage the purchase or sale of a product or service. The purpose of this sales promotion program is to encourage consumers or distributors to make purchases. Sales promotion activities carried out by marketers to increase sales of hand sanitizer products are quite diverse, ranging from coupons, gifts, price reductions, cashback, and so on, which is one of the reasons consumers want to buy hand sanitizer products offered in the market. This condition can be seen from the average score of the sales promotion variable of 407.4 (Table.4) which indicates that the sales promotion activities of hand sanitizer products offered to consumers by marketers can be responded to well by consumers.The correlation of brand knowledge, price, and sales promotion with purchasing decisions (Table 7) show a high level of correlation for brand knowledge of 1,000; respectively moderate correlation level for price and sales promotion is 0.538 and 0.473. As for the results of hypothesis testing, to answer the prediction of the influence of variable brand knowledge, price and sales promotion on purchasing decisions, it is known that only sales promotion variables significantly influence purchasing decisions for hand sanitizer products in the pandemic era. Variable brand knowledge and prices based on the results of hypothesis testing, do not affect consumer purchasing decisions in the pandemic era when buying hand sanitizer products (Table. 5)

Reporting Research Results

Data analysis in this study uses multiple linear regression, which aims to predict the role of brand knowledge, price, and sales promotion on consumer purchasing decisions on hand sanitizer products in the pandemic era. The research model, written with the following equation:

$$PD = 6{,}367 + 0{,}037\ BK - 0{,}204\ P + 0{,}847\ SP + e$$

Based on the research model, it is known that the constant number is positive 6.367 which indicates if the Brand Knowledge (BK) Price (P) and Purchase Decision (SP) variables if there is no change or equal to 0 then the Purchase Decision (PD) is 6.367. As for Brand Knowledge, it has positive multiple regression coefficients of 0.037, this means that if brand knowledge is increased every 1 time, it will increase Purchase Decisions by 0.037. The price has multiple regression coefficients of Negative (-)

0.204, this means that if the price is increased every 1 time, it will reduce the Purchase Decision by 0.204. Meanwhile, Sales Promotion has positive multiple regression coefficients of 0.847, which means that if Sales Promotion is increased every 1 time, it will increase purchasing decisions by 0.847.
The results of testing the research hypothesis explained that the decision to purchase hand sanitizer products in the pandemic era was influenced by the sales promotion variable with a significance value of <0.05. The brand knowledge and price variables have no effect on consumer purchasing decisions with a significance value > 0.05 (Table. 5)

Table 5. t-Test

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	6,367	1,103		5,771	0
	Brand knowledge	0,037	0,077	0,041	0,48	0,633
	Price	-0,204	0,118	-0,21	-1,729	0,087
	Sales Promotion	0,847	0,104	0,958	8,138	0
a. Dependent Variable: Purchase Decision						

Source : Output SPSS v25, 2021

Based on the data in Table (?), it is known that the significance value of Brand Knowledge is 0.633, exceeding the significant level of 0.05, meaning that H_0 is accepted and H_a is rejected or there is no influence of Brand Knowledge on purchasing decisions for hand sanitizer products. Price significance value is 0.087 exceeding the significant level of 0.05, meaning that H_0 is accepted and H_a is rejected or there is no influence of Price on the Purchase Decision of hand sanitizer products, while the significance value of Sales Promotion is 0.000 does not exceed the significant level of 0.05, meaning that H0 is rejected. and Ha is accepted or there is an influence of sales promotion on the decision to purchase hand sanitizer products.

The results of simultaneous hypothesis testing related to brand knowledge, price, and sales promotion variables on purchasing decisions are presented in Table 6.

Table 6. ANOVA (F test)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	708,122	3	236,041	61,086	.000[b]
	Residual	363,225	94	3,864		
	Total	1071,347	97			

a. Dependent Variable: Purchase Decision
b. Predictors: (Constant), Brand knowledge, Price, Sales Promotion
Source: Output SPSS v25, 2021

Based on the data in Table 6. it is known, the significant value of the research is 0.000 or <0.05, this indicates that the Brand Knowledge (BK) Price (P) and Sales Promotion (SP) variables have a simultaneous effect on Purchase Decision (PD) on hand sanitizer products. This condition can be

explained by the correlation level of each variable of brand knowledge, price, and sales promotion with purchasing decisions, the details are presented in Table 7.

Table 7. Correlations

Control Variables			Brand knowledge	Price	Sales promotion
Purchase decisions	Brand knowledge	Correlation	1	0,538	0,473
		Significance (2-tailed)		0	0
		Df	0	95	95
	Price	Correlation	0,538	1	0,746
		Significance (2-tailed)	0		0
		Df	95	0	95
	Sales promotion	Correlation	0,473	0,746	1
		Significance (2-tailed)	0	0	
		Df	95	95	0

Source: Output SPSS v25, 2021

The contribution of brand knowledge, price, and sales promotion variables to purchasing decisions for hand sanitizer products is 66.1 percent. This shows that there is 33.9 percent of other variables that are not in the research model can influence purchasing decisions on hand sanitizer products in the pandemic era (Table 8).

Table 8. Model Summary

Model	R	R Square	Adjusted R Square	Std. An error of the Estimate
1	.813[a]	0,661	0,65	1,96573

a. Predictors: (Constant), Sales Promotion, Brand knowledge, Price
b. Dependent Variable: Purchase Decisions
Source: Output SPSS v25, 2021

Discussion

Hand sanitizer products are one of the most purchased products during the pandemic era, in addition to medical masks and pharmaceutical products. This study aims to analyze consumer purchasing decisions in the pandemic era on hand sanitizer products. This is due to the large selection of hand sanitizer products available on the market, which provides a choice for consumers. In the current pandemic era, although hand sanitizer products are sought after and purchased by consumers when deciding on a product or brand choice, most of the consumers have identified and recognized these products before. This is because there has been enough information submitted by marketers in various media about the importance of using hand sanitizers to reduce the effects of virus transmission that occur during a pandemic.

Consumer purchasing decisions on a product, influenced by external stimuli such as marketing programs run by marketers, by providing a variety of products that suit the needs and wants of the market. In addition, the determination of affordable prices and following the quality and benefits can encourage product purchases. Another thing that marketers do to increase product purchases is by providing products at the point of purchase. Then, marketing communication activities are aimed at sensitizing,

reminding, and encouraging purchase decisions. Other factors that are also able to influence consumer purchasing decisions are motivation, perception, memory, and the character of each consumer which is influenced by cultural, social, and personal factors. These factors play a role in consumer purchasing decisions. The high demand for hand sanitizer products during the pandemic era is an interesting phenomenon that occurs due to a shift in consumer behavior that is more seeking, choosing, and consuming products that aim to maintain health. Therefore, the scope of the research is limited to brand knowledge, prices, and sales promotions that underlie consumer purchasing decisions on hand sanitizer products in the pandemic era. So that the research results are expected to provide important information for marketers in making marketing decisions related to what products to offer and which markets to serve.

The results of the study explain that consumers can make good purchasing decisions when they choose, buy and use hand sanitizer products. This, based on the results of the study, shows that consumers have good brand knowledge, so they can identify and recognize hand sanitizer products. Although the hand sanitizer products offered to consumers have various prices, consumers can find out the quality and benefits of these products based on the prices set by the marketers. As for sales promotions for hand sanitizer products during the pandemic era, they are quite diverse, starting from giving coupons, gifts, price reductions, cashback, and so on. This condition makes the sales promotion of hand sanitizer products offered by marketers respond well to consumers.This is in line with the results of hypothesis testing, which explains that sales promotions can influence consumer purchasing decisions. However, the results of hypothesis testing do not prove that the level of knowledge of hand sanitizer product brands from a consumer who can identify and recognize hand sanitizer product brands does not affect purchasing decisions. In addition, consumer purchasing decisions when determining the choice of hand sanitizer products do not pay attention to the price factor as the basis for making purchasing decisions, which means that price is not a factor that influences consumer purchasing decisions for hand sanitizer products in the pandemic era.

The results of the study stated that brand knowledge did not affect consumer purchasing decisions for hand sanitizer products. This condition is following the results of the research by (De Toni et al., 2021) which states that the level of brand knowledge does not affect consumer purchasing decisions. This is because brand knowledge for hand sanitizer products is generally considered the same by most consumers. The same brand knowledge on each hand sanitizer product, in line with feelings, images, experiences, and beliefs that all hand sanitizer products have the same function or benefit to prevent and reduce the impact of virus transmission in the pandemic era so that the choice of any brand related to the product Hand sanitizer is believed to be able to protect consumer health during the Covid-19 pandemic.

In addition, based on the results of the research, the price does not affect consumer purchasing decisions when buying hand sanitizer products. This is in line with the results of the research by (Simatupang et al., 2021) which states that the price factor does not affect purchasing decisions. As is known, that price is part of the attractiveness of a market offer that describes the value of the product. If the marketer can set a price that is following the perception of consumer value, then the price will be well received by the target market. The results of the study which state that purchasing decisions are not influenced by price, indicate that consumers have understood the perceived value of these hand sanitizer products which are felt to have the benefits needed during the pandemic era. This condition is caused by consumers thinking that the pricing of hand sanitizer products is following the quality and benefits that can reduce the impact of virus transmission and the prices of these products are quite affordable.

As for sales promotion, based on research results influence consumer purchasing decisions for hand sanitizer products. This is in line with the results of research by (Suryani & Syafarudin, 2021) which explains that sales promotion as part of a marketing campaign in the form of short-term incentives for consumers is the basis for making purchasing decisions. This condition is because during the pandemic era there were many offers of hand sanitizer products on the market that provided many alternative product choices. So that when consumers search for and choose hand sanitizer products, most consumers consider purchasing hand sanitizer products that provide incentives and short-term benefits in the form of price discounts, giving gifts or coupons, and price packs. Therefore, sales promotions as part of non-routine short-term marketing campaigns are expected to be able to encourage and accelerate the ever-

changing market response, which aims to encourage the purchase or sale of hand sanitizer products in the pandemic era.

Based on the results of the study, it is known that the decision to purchase hand sanitizer products is a form of consumer attitudes that have determined product choices as part of their response, after processing various kinds of information submitted by marketers regarding products, prices, places and promotions that are influenced by the conditions of the marketing environment. such as social, cultural, economic, political, and technological conditions. So that it appears in the minds of consumers, about product choice, brand choice, choice of place of purchase, choice of time to buy, how many products are purchased, and choice of payment method. However, consumers' purchasing decisions begin when they recognize a need. Therefore, marketers must carefully determine the choice of what products to offer and which markets to serve.

Accuracy in choosing the products offered will increase awareness, knowledge, and understanding of consumers about these products so that consumers have the readiness to buy products when they need them. Based on this, marketers must always provide information about the brand into the memory of consumers. Information conveyed to consumers must be related to the brand and its associations about the brand, either verbally, visually, abstractly, or contextually, so that in the end consumers have good knowledge about a brand, which is stored in the minds of consumers and will be explored again. , when they are faced with the choice of a product.

Price as a form of value that consumers exchange for various benefits obtained after having or using a product or service, becomes a challenge for marketers because it must be determined appropriately and appropriately for the product or service offered. This is because setting the right price is the key to creating and capturing customer value. This study states that the purchase decision of hand sanitizer products is not influenced by price. This condition does not explain that marketers are not right in setting prices. However, there is a psychological reason that shows that the price of hand sanitizer products is following what consumers perceive and is in line with marketers' expectations, which means that the price set already reflects the quality and benefits of the accompanying product. Therefore, marketers need to also pay attention to the level of demand, competitive conditions, target market to be served, competitor reactions as well as government and environmental policies or regulations. So that marketers can quickly adapt in responding to all changes that occur in the marketing environment, namely by setting a higher price than competitors, setting the same price as competitors, or setting lower prices with competitors. This is because based on the results of the study, it is explained that a price change (increase or decrease) will affect consumer purchasing decisions for hand sanitizer products. For this reason, marketers can set the price of the product mix, for example by bundling pricing for hand sanitizer products with masks or other products.

Although sales promotion is a factor that influences consumer purchasing decisions for hand sanitizer products, marketers must still pay attention to it. This is because sales promotion activities are short-term incentives that are not routinely carried out by marketers, which will encourage consumer brand switching behavior. After all, they no longer get incentives from marketers and will switch to competing products that provide incentives. Under these conditions, marketers need to carry out repeated sales promotion activities with different defined objectives, for example providing coupons, gifts, or product samples to encourage bulk purchases, product testing for those who have not used the product, or to distract consumers from competitors. In addition, marketers can encourage seasonal purchases by providing merchant incentives, guarantees for returning goods, joint advertising, or gifting goods. Then, conduct sales promotions that aim to encourage support for the product or brand by holding contests related to products or giving bonuses to new consumers.

The results also explain that purchasing decisions for hand sanitizer products are formed from brand knowledge, prices, and sales promotions. However, based on the research model formed, there are still factors that contribute to making purchasing decisions. This condition provides opportunities for further research, to develop research by adding or replacing independent variables with brand perception, product mix prices, advertising attractiveness, and others. In addition, the limitations of the study were because during data collection there were PPKM provisions aimed at preventing virus transmission, further research could be carried out by determining the category of research samples based on psychographic characteristics. Further research can also be carried out using more comprehensive data

analysis, for example by using path analysis, or more complex ones by using structural analysis with SEM.

Conclusion

The results of research on the analysis of consumer purchasing decisions on hand sanitizer products in the pandemic era are influenced by brand knowledge, prices, and sales promotions. However, the resulting research more or less illustrates a shift in consumer behavior that prioritizes buying products needed to maintain health during a pandemic. Although, in testing the hypothesis, only sales promotions were proven to significantly influence consumer purchasing decisions on hand sanitizer products. This condition has not fully explained consumer behavior in the pandemic era, which is strongly influenced by motivation, perception, memory, and experience that determine consumer attitudes themselves in responding to changes in the marketing environment, especially due to the global pandemic COVID 19.

Limitation

The results of the study have not been fully able to produce sufficient information to describe consumer purchasing decisions in the pandemic era, this is because the research process was carried out during the implementation of PPKM. Thus, researchers are less than optimal to explore all information related to consumer purchasing decisions on hand sanitizer products because data collection can only be done online (online questionnaire). However, this provides space for further research to develop this research by changing or changing the research object, research population, data collection techniques, and data analysis used.

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Auditing during the COVID-19 Pandemic: The effect of social distancing on auditing quality (Period April 2020 – December 2021)

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Abstract
This paper aims to discuss the theoretical impact of the COVID-19 social distancing outbreak on audit quality. This paper uses a desk study method to explore the possible impact of the COVID-19 crisis on five key considerations for audit quality during the pandemic. These include auditor competence, auditor independence, auditor skepticism, going concern assessment, and audit procedures. As many believe that the COVID-19 outbreak has become a financial crisis, and the authors also believe that the impact of the COVID-19 pandemic will be the toughest challenge for auditors and In particular, the authors believe that COVID-19 social distance can largely affect, Subsequent Events, Obtaining sufficient appropriate audit evidence, Going Concern, Professional Skepticism, which in turn can have a severe impact on audit quality. Due to the implementation of the work from home strategy, audit firms are strongly recommended to modify audit evidence collection procedures, revise the identification and assessment process for risks of material misstatement, and modify planned audit procedures or perform alternative procedures or appropriate follow-up audit procedures. Professional skepticism is one thing that is also important to improve because the tendency of material misstatements, whether caused by error or fraud, is more prone to occur in periods of economic disruption. In addition, auditors are advised to explore alternative procedures, including technology as far as possible. The authors recommend that auditors need to communicate carefully with management and those charged with corporate governance. Meanwhile, the stock market and other government agencies are expected to provide temporary tolerance in fulfilling the requirements for companies. With this, it is hoped that it will help companies that implement work from home strategies to continue to provide reports that are by financial reporting standards in Indonesia and auditors can also maintain audit quality. It is hoped that this paper will fill important research gaps in the auditing literature. In addition, this paper can be used as a basis for compiling research instruments (.questionnaire or interview) to provide empirical evidence on the potential impact of COVID-19 on audit quality.
Keywords: Audit quality, Audit Profession, Financial Reporting, COVID-19.

1. Introduction

The Corona Virus Disease (COVID-19) is endemic worldwide and has hit many sectors in Indonesia, including the business processes run by the Public Accounting Firm, be it internal management, the network of Public Accounting Firms, to the need for reconsideration of audit engagements to alternative audit approaches that must be taken during this pandemic. After the World Health Organization (WHO) declared the COVID-19 as a contagious disease that kills human health, The Indonesian government implements a Large-Scale Social Distancing. This policy led the government to issue a work from home regulation to prevent a broader contagion of the COVID-19. The effect of this policy affects the results of obtaining audit evidence due to restrictions on access and travel as well as the availability of personnel from the auditor and auditee. However, with this condition, the auditor is still required to maintain audit quality and obtain sufficient and appropriate audit evidence to support the audit opinion that will be issued.

There are 4 groups of definitions of audit quality defined by Watkins et al. (2004). The first, given by DeAngelo (1981) defines audit quality as the market value probability that the definition of financial statements is material and the auditor will find and misrepresent such errors. Second, presented by (Lee, Liu & Wang, 1999) audit quality is the probability that the auditor will not report an audit report with a fair opinion without a report for financial statements that contain material. The third definition is given by Titman & Trueman (1986); Beaty (1986), Krinsky & Roternberg (1989); and Davidson & Neu (1993). According to them, audit quality is measured by the accuracy of the information reported by the

auditor. Audit quality is determined by the ability of the audit to reduce noise and bias and increase the purity of accounting data (Watkins et al., 2004). Auditors, thus, face unprecedented practical challenges in many areas, and it is likely that many companies go bankrupt or even start manipulating their earnings during this extraordinary situation.

Therefore, the Auditor needs to pay close attention to how SA 330 (Auditor Response to Assessed Risk) serves as a guide to identifying changes that are relevant to the auditor's ability to obtain sufficient and appropriate audit evidence during the pandemic. The quality of the audit process can significantly affect the auditor's ability to detect material misstatements (Lenz and Hahn, 2015). In addition, the Auditor is required to modify the audit report or formulate an opinion on the financial statements by taking into account the principles stated in SA 700 (Formulation of Opinions and Reporting on Financial Statements), SA 705 (Modification of Opinions in the Independent Auditor's Report), and SA 706 (Emphasis Paragraph). One Matter and Another Paragraph in the Independent Auditor's Report), and modifying the Independent Auditor Report by SA 570 (Going Concern). This is following the recommendation from Financial Reporting Council (2020) has mentioned that: In this period auditors will need to consider the impact of COVID-19 on the following:

- The auditor's risk assessment, and whether it needs to be revised.
- How the auditor gathers sufficient, appropriate audit evidence, recognizing that the planned audit approach may need to change, and alternative procedures developed, particularly in-group audit engagements. The auditor must be able to gather the necessary evidence to be able to report or consider modifying their audit opinion.
- How the group auditor proposes to review the work of component auditors to meet the requirements in standards, including considering whether alternative procedures can be used: for example, where travel is restricted.
- The auditor's assessment of going concern and the prospects of an audited company, given that uncertainty about the global economy and the immediate outlook for many companies, has increased.
- The adequacy of disclosures made by management about the impact on the company of COVID-19, so that users of the financial statements are properly informed, and the company's prospects and how they might be affected are described, recognizing the high degree of uncertainty.
- The need for the auditor to reassess key aspects of their audit as a result of the fast-changing situation, recognizing that this assessment will take place right up to the point of Signing the auditor's report, and may need the provision of further evidence and information by management. Where the current circumstances have had a significant impact on the delivery of the audit, the auditor will need to consider how to explain this in their report, for example, by reporting this as a key audit matter.

The points mentioned above motivate us to the literature study method to examine the impact of COVID-19 on audit quality. Our paper tries theoretically answer the following research questions:

RQ1. How can the COVID-19 outbreak affect the quality of the audit process during the pandemic?

Although there have been several studies recently published to highlight the tremendous economic and social impact of the COVID-19 pandemic such as Goodell (2020), so far, very limited studies exploring the possible influence of the COVID-19 outbreak on maintaining audit quality such as Albitar, K., Hussainey, K., Kolade, N. and Gerged, A. (2021), Therefore we want to expand the research literature on the performance of public accounting firms in maintaining audit quality during the Covid-19 pandemic. This aims to address the research gap in providing literature and expand on existing previous studies by exploring the possibility of the impact of the COVID-19 outbreak on audit quality. In particular, we review the potential impact of this pandemic on four aspects related to audit quality: auditor competence, auditor competence, auditor independence, auditor skepticism, going concern assessment, and audit procedures. So, our paper provides a systematic overview for future researchers, investors, and auditors about the possible effects of social distancing on audit quality. In this case, our research contributes to the existing literature by conceptualizing the relationship between COVID-19 and audit quality. Future research can complement our research by establishing a questionnaire survey or interview schedule to empirically test COVID 19 audit quality.

The paper is structured as follows. Section 2 discusses the impact of the COVID-19 pandemic on auditor competence. The impact of the COVID-19 pandemic on independence is reviewed in Section 3, while its impact on auditor skepticism is explained in Section 4. In Section 5, we discuss the potential impact of the COVID-19 ongoing concern assessment, section 6 we discuss the potential impact of the COVID-19 on audit procedures and section 7 is our conclusion.

2. COVID-19 Pandemic and auditor competence

Auditor's professional competence relates to the auditor's ability to practically and skillfully apply gained knowledge and possesses experience in performing the auditing process objectively, carefully, and accurately (Zahmatkesh & Rezazadeh, 2017). Lee's (1993) opinion is that current auditors are expected to have substantial professional competence in various interrelated fields that affect their audit tasks. This is following the current Covid-19 pandemic requires auditors as professionals to improve competence in responding to the impact that will occur on financial reports and various supporting aspects to maintain audit quality. Auditor competence that must be improved is related to aspects related to auditor quality including auditors are required to understand several packages of economic policies, regulations, and non-routine transactions that occur during this period and Auditors also pay special attention to the closing process, especially on certain accounts, journals adjustment. Auditors are also expected to read various studies published by public accountants associations both domestically and abroad related to audit services during the Covid-19 pandemic.

Research conducted by (Anderson et al., 1998), Practitioners should continuously maintain and develop their professional knowledge to increase their expertise to the required level to provide services to clients based on the latest developments in the fields, regulations, techniques and, methods of performing tasks. It is hoped that auditors can continue to improve their competence during the Covid-19 pandemic because auditor competence is directly proportional to audit quality. Therefore, the auditor's competence which can be seen from knowledge, skills, and experience, can influence the audit quality. The higher the competence level of an auditor, the more audit quality. Hence, the high level of an auditor will affect the breadth of knowledge he/she has.

This is following research of (Alsughayer, S.A, 2021), Where auditor competence is based on knowledge, continuous improvement and training, the ability to find professional experience and certification, education have a significant impact on audit quality. From the empirical results, it can be concluded that the higher the competence of an auditor, the better the audit results.

3. COVID-19 Pandemic and auditor independence

Auditor independence may be defined as an auditor's unbiased mental attitude in making decisions throughout the audit and financial reporting process. An auditor lack of independence increases the possibility of being perceived as not being objective. This means that the auditor will not likely report a discovered breach (DeAngelo, 1981). Auditor's independence includes independence both in fact and in appearance. That is, independence refers not only to a mental state of objectivity and lack of bias on the part of auditors but also to a reasonable investor's perception of auditors' capability of exercising objective and impartial judgment (SEC, 2000). The major threats to auditor independence are the fees perceived by the auditor for audit and non -audit services and the length of the auditor–client relationship. The impaired independence of an auditor results in poor audit quality and allows for greater earnings management and lower earnings quality (Okolie, 2014). As the auditor-client relationship lengthens, the auditor may develop a close relationship with the client and become more likely to act in favor of management, resulting in reduced objectivity and audit quality. Auditor independence gets a lot of attention from researchers, regulators, and public observers. Because of things it has been described as having a great significanct impact on audit quality. Several reasons have been given to the auditor's important interest independence to audit quality and this has shaped long-standing debate among academics, regulators, and market watchers on how best to protect auditors and reduce user concerns financial reports (Tepalagul & Lin, 2015).

During the Covid-19 pandemic, the independence of auditors is increasingly being tested, because this condition raises the issue of going concern for the entity, where the auditor must be involved with management from the start to understand the company's survival assessment, especially related to significant plans to deal with the effects of the COVID-19 pandemic. The auditor assesses the projected future cash flows of management, along with the assumptions, actions, and obstacles that management

will take to realize these projections. Furthermore, it is necessary to evaluate management's assumptions and apply professional skepticism when evaluating management plans.

In assessing the life of the company, it is expected that the auditor can maintain an attitude of independence considering that the auditor has a good relationship with management or even management considers the auditor to have been paid and must provide an opinion on management's actions. However, it is expected that the auditor will be able to be independent with the various pressures that exist to maintain audit quality, Mautz and Sharaf (1961) that independence is an important audit standard to show the report that is the responsibility of management.

According to Mautz & Sharaf (1993), independence is a fundamental auditing standard since the opinion generated by independent public accountants aims to increase the credibility of financial statements. If the auditors are not independent, then their opinion will not provide any additional values.

4. COVID-19 Pandemic and auditor skepticism

The professional standards of public accountants define professional skepticism as an attitude that includes a questioning mind, being alert to conditions that may indicate possible misstatements due to fraud or error, and an important assessment of audit evidence (SA, 200). Nelson (2009) defines professional skepticism as demonstrated by the auditor's judgment and a decision that reflects a high assessment of the risk that an assertion is incorrect, depending on the information available to the auditor. The professional standards of public accountants (2013) provide some things to watch out for as follows:

- Audit evidence that contradicts the audit evidence obtained.
- Information that raises questions about the reliability of documents and responses to inquiries used as audit evidence.
- Circumstances indicating the possibility of fraud
- Circumstances suggest the need for additional audit procedures in addition to those required by auditing standards.

Professional skepticism is necessary for important assessments of audit evidence. This includes questioning contradictory audit evidence, the reliability of documents and responses to inquiries, and other information obtained from management and those charged with governance. Professional standards require the auditor not to assume that management is dishonest, but also not to assume that management is completely honest. So auditors are asked not to have too high a level of trust in their clients.

During the Covid-19 pandemic, auditors' professional skepticism is required to be maintained. Auditors are expected to act with prudence and thoroughness by professional standards and the applicable professional code of ethics when carrying out professional activities and providing professional services. Prudence and thoroughness include the responsibility to act under the terms of an assignment carefully, thoroughly, and promptly. This must be done because material misstatements, whether caused by error or fraud, are more prone to occur during periods of economic disruption.

Beasley et al. (2001) based on AAERs (Accounting and Auditing Releases), for 11 periods (January 1987 – December 1997) states that one of the causes of the auditor's failure to detect financial statements is the low level of skepticism of audit professionals. Based on this study, from 45 cases of fraud in financial statements, 24 cases (60 percent) of which occurred because the auditor did not apply adequate professional skepticism. This proves that skepticism must be owned and applied by auditors.

5. Covid-19 pandemic and going concern assessment

According to Hayes et al. (2014), the going concern assumption of an entity is if an entity can carry on its business for the future without the intention or necessity to liquidate, stop trading, or seek protection from creditors by applicable laws and regulations. At present stakeholders are increasingly concerned about the impact of the COVID-19 pandemic on entities' ability to continue as a going concern given the significant economic downturn and, particularly, the reduction in entities' revenue, profitability, and liquidity. This has increased the importance of going concern assessments and the related disclosures.

During this COVID -19 pandemic, the auditor should pay close attention to the entity's assessment of its ability to maintain business continuity. Given the conditions today, worldwide economic uncertainty as well as increasing uncertainty of business and operations for many entities, can present

challenges for auditors' considerations. The auditor must also consider the impact of the evaluation auditor on management's assessment of the entity's ability to maintain business continuity and communication to parties responsible for governance. It is essential that auditors are skeptical when conducting the ongoing concern assessment, and that their working documents should show evidence of such skepticism. This also raises the challenge of risking internal control operations due to the work-from-home strategy (PWC, 2020). In addition, for auditors to need spend sufficient time on the assessment of going concern and accept that it will take a longer time than usual for most clients. This work may be more sophisticated during the outbreak of COVID-19 as the uncertainty level is higher, which implies the crucial necessity to use the appropriate level of staff and to provide the appropriate and sufficient support to auditors (KPMG, 2020). Due to the rapid changes in the situation, it is also important for auditors to ensure that the subsequent review of events continues until signing the audit report (PWC, 2020).

Therefore, the Auditor needs to pay close attention to how SA 330 (Auditor Response to Assessed Risk) serves as a guide to identifying changes that are relevant to the auditor's ability to obtain sufficient and appropriate audit evidence during the pandemic. The quality of the audit process can significantly affect the auditor's ability to detect material misstatements (Lenz and Hahn, 2015). In addition, the Auditor is required to modify the audit report or formulate an opinion on the financial statements by taking into account the principles stated in SA 700 (Formulation of Opinions and Reporting on Financial Statements), SA 705 (Modification of Opinions in the Independent Auditor's Report), and SA 706 (Emphasis Paragraph). One Matter and Another Paragraph in the Independent Auditor's Report), and modifying the Independent Auditor Report by SA 570 (Going Concern). All of these circumstances have led many companies to have higher business risks. Therefore, once again, because of this pandemic, we should expect it to have a considerable impact on the completion of the going concern assessment, which seems to be associated with audit quality (Salehi et al., 2020).

6. Covid-19 pandemic and audit procedures

Another issue that can be affected by the current pandemic is the performance of analytical procedures that is representative of an integral part of the audit process (Messier et al., 2013). Analytical procedures are used for audit planning, fieldwork and audit conclusion, evaluation and reporting stages (Trompeter and Wright, 2010; Messier et al., 2013; Noh et al., 2017). During the COVID-19 pandemic, because many companies could go bankrupt or manipulate their reported earnings during this crisis, auditors have to increase the use of analytical procedures because analytical procedures have the lowest cost and are relatively easy to calculate (Rose et al., 2019).

The Institute of Certified Public Accountants publishes technical-newsflash (2020) which provides guidelines related to alternative procedures. It is emphasized that the auditor's responsibility is to obtain adequate audit evidence sufficient and appropriate before issuing the audit report. It is recognized that the restrictions on access and travel and limited availability of personnel due to considerations health can impair the auditor's ability to obtain audit evidence sufficiently and correctly. For group audits, group engagement teams and component auditors must adapt the audit approach to current conditions. Auditors are recommended to explore alternative procedures, including technology, to the extent possible. Completion of a high-quality audit under current conditions takes time additional information, which may affect reporting deadlines. Consequently, the auditor needs to delay the issuance of his audit report, and if this is the case unable to resolve the matter, the auditor needs to modify the reported audit to reflect that the auditor has not been able to obtain the audit evidence required. Auditors need to communicate carefully with the parties' management and those charged with governance in determining this matter.

In addition, Standard Audit (SA 330) the Auditor needs to implement relevant changes related to the overall response auditor's ability to obtain sufficient appropriate audit evidence during COVID-19 pandemic, for example,direct observation or recalculation of inventory in the client's warehouse is not carried out due to regional quarantine in an area (some alternative audit procedures need to be considered). As another example, confirmations of accounts receivable obtained from clients' customers are more reliable than records made by clients. However, the level of reliability of the evidence obtained from the client is determined by the reliability of the client's internal controls (Rose et al., 2019). On the other side, the COVID-19 pandemic has decreased the use of the original forms, for example, original invoices that used to support the payments transactions that are more reliable than the copy invoices sent

by email; Thus, the working-from-home strategy would affect the sufficiency and reliability of audit evidence and accordingly might affect audit quality (KPMG, 2020) The auditor shall perform audit procedures designed to obtain audit evidence sufficient and appropriate, that all events that occurred between the reporting date financial statements with the date of the auditor's report that requires disclosure in financial reports related to the Covid-19 Pandemic, have been identified. Where relevant, the auditor is also required to consider the consequences of changing deadlines entity's financial reporting and subsequent events that occurred before the report date independent auditors.

7. Conclusion

As many people believe, the COVID-19 outbreak that has lasted for approximately 2 years has caused a financial crisis and has had both short-term and long-term impacts if a solution is not immediately sought. This is a big challenge for the auditor profession in maintaining audit quality with all kinds of pressures and obstacles it faces. This is a short paper that aims to theoretically discuss how audit quality may be affected by the COVID-19 pandemic, which provides advice for future researchers and auditors about what must be prepared in the face of a pandemic to maintain audit quality.

Theoretically, we expects that auditors are able to improve their competence in completing audit tasks during a pandemic, auditor independence that must be maintained is one of the keys to auditor professionalism, auditor skepticism is expected to be sharper during a pandemic due to various fraud issues that may arise under circumstances unstable economy, Company going concern assessment which must be analyzed more carefully taking into account various aspects of feasibility and adequacy in providing opinions related to the company's going concern and of course overseeing and analyzing management reports in conveying risk mitigation faced during the pandemic era, Audit procedures carried out what auditors must-do during the pandemic will be different from the previous time before the pandemic, various directions from associations and experts in the audit field can be used as a reference for auditors to carry out alternative audit procedures during the pandemic, so that the quality audits are guaranteed.

Our study has several policy and practical implications. Due to the social impact of the work from home strategy, public accounting firms are highly recommended to invest in digital programs and technology development that will make it easier for auditors when they work from home. This can increase the effectiveness and flexibility of communication between auditors and clients. This can increase the effectiveness and flexibility of communication between auditors and clients. For associations that oversee public accountants, they can provide detailed input guidance related to how alternative procedure steps are carried out and adjusted to the size of the public accounting firm. For the government as a policymaker, it can continue to make policy packages that help companies to continue to be able to carry out their obligations to obey the rules but still be a going concern during a pandemic like this.

8. Limitations

The limitation of this study is that it has not been able to provide a clear picture related to the auditor's performance and of course what alternative procedures have been carried out by the auditor in maintaining audit quality. However, our research can be used as a basis for building research instruments (eg. questionnaires or interviews) to provide empirical evidence on the potential impact of COVID-19 on audit quality. Future researchers can add to the phenomenon that has occurred after more than 2 years of the pandemic, whether there are cases involving auditors in giving opinions and it turns out that the opinion is not by the facts. It can be seen whether these cases occur because the factors in our research are not met or there are indications of other factors.

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Online Learning Readiness, Accounting Automation and Learning Process

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Abstract
This research was conducted to evaluate the increase in intention to contribute to the automation of accounting in order to increase digital literacy and formulate virtual learning patterns of computerized accounting practice. There are obstacles in online learning in the form of the effectiveness of learning outcomes, especially on practical materials to improve skills or proficiency in mastering computerized accounting, accompanied by a gap in understanding in the technical field of design and automatic transaction processing with programming language instructions for accounting application design. Experimental designed through the stages of practicing on cloud-based accounting followed by a diffusion stage of practice through spreadsheet applications with automation program instructions as a mediator for increasing digital literacy. Analyze with PLS-SEM to evaluate between online learning readiness, computerized accounting and digital automation with learning process. The results indicate a significant increase in the intention to improve digital literacy and contribute to the development of accounting automation & digitization as well as understanding of program language and application design. There is an increasing intention to contribute to the development of automation and digitalization of accounting by the process of repeated exercise (diffusion) through a certain pattern that indirectly increasing their digital literacy.
Keywords : application design; automation and digitalization of accounting; digital literacy; diffusion stage; online learning readiness
JEL Classification: A2, M4, G4, O3

Introduction

Bank Indonesia reported that the value of Indonesia's digital transactions in August 2021 increased by 43.6% compared to the value in August 2020 of USD 1.73 billion (Kominfo, 2020)(Kominfo, 2020) this shows that Indonesia's digital economy has good potential to continue to be the main growth driver in 2021 and beyond, given its large domestic market driven by consumption and the acceleration in the use of digital tools during 2020 (OxfordBusinessGroup, 2021). The increasing number of MSMEs that rely on the digital segment, is an important source of employment in Indonesia, namely out of around 70 million Indonesians or a quarter of the population who work in the informal economy, around 8 million are freelancers or gig-economy workers who drive the digital ecosystem in Indonesia (OxfordBusinessGroup, 2021). If Indonesia can quickly return to pre-pandemic growth rates, then Indonesia could occupy the position of the seventh largest economy in the world in 2030, from 16th position in 2019, rising above Italy, Russia, South Korea, and others. To achieve this goal, countries must focus on building productivity and competitiveness after the COVID-19 pandemic subsides, an effort that requires immediate priority (Agarwal et al., 2021). The increase in the information and communication sector with the highest growth in Indonesia of 10.58% (year-on-year) in 2020, leads to three priority proposals for the digital economy working group at the G20 Forum, namely (1) Connectivity and Post-Covid-19, (2) Digital skills and digital literacy, (3) Cross-border data flow and free data flow with trust (Kominfo, 2020) . One of the obstacles in accelerating Indonesia's digital economy is digital talent with the need for up to 9 million individuals for various roles, especially in the fields of Science, Technology, Engineering & Mathematics (STEM) (Deloitte, 2021). The government's attention to increasing human capital is one of the roadmaps for Indonesia's economic development through the framework that is being implemented in the form of (1) Access to education, especially higher education, (2) Quality of educators and facilities, (3) Synergy between educational programs and agencies, (4) Vocational education network, and (5) Tax and fiscal incentives in the R&D sector. Basically it is an upgrade of human capital including by redesigning the curriculum and creating a professional talent mobility program (Kemenkeu & ADB, 2020). The description shows that the human capital factor is one of the priorities in increasing digital literacy.

Accounting is one of the professions that has been affected by automation since 2018 and is predicted to continue until 2025 (WorldEconomicForum, 2020) and requires adaptation to the adoption of information technology so that its professional relevance can contribute to the digital economy.

Table 1. Top 20 Job Roles in Increasing and Decreasing Demand Across Industries

	Increasing Demand		Decreasing Demand
1	Data Analytics and Scientists	1	Data Entry Clerks
2	AI and Machine Learning Specialist	2	Administrative and Executive Secretaries
3	Big Data Specialist	3	Accounting, Bookeping and Payrol Vlerks
4	Digital Marketing and Strategy Specialist	4	Accountant and Auditors
5	Process Automation Specialist	5	Assembly and Factory Workers
6	Business Development Professionals	6	Business Services and Administrative Managers
7	Digital Transformation Specialists	7	Client Information ad Customer Services Workers
8	Information Security Analyst	8	General and Operational Managers
9	Software and Application Developers	9	Mechanics and Machinerry Repairers
10	Internet of Things Specialists	10	Material Recording and Stock Keeping Clerks
11	Project managers	11	Financial Analysts
12	Business Services and Administration Managers	12	Postal Services Clerks
13	Database and Network Professionals	13	Sales Representatives Wholesales and Manufactured, Tehcnical and Scientific Products
14	Robotics Engineers	14	Relationship Managers
15	Strategis Advisors	15	Bank Tellers and Related Clerks
16	Management and Organisation Analysts	16	Door to Door Sales News and Streets Vendors
17	FinTech Engineer	17	Electronics and Telecoms Installer and Repairers
18	Mechanics and Machinerry Repairers	18	Human Resources Specialists
19	Organisational Development Specialists	19	Trainning and Development Specialists
20	Risk Management Specialists	20	Construction Laborers

Source : Future of Jobs Survey 2020, Worl Economic Forum

Table. 1. shows the declining and increasing roles of various industries, including the accounting profession in the top position, which has decreased its role and has been replaced by automation. The needs of the accounting profession include the preparation of financial statements that are in accordance with financial standards (SAK) whose processes can be automated through various applications (Deloitte, 2019) that are integrated into the Accounting Information System (AIS) requiring various additional skills enhancements to strengthen the adoption of technology and networks culture (Deshmukh, 2006, p. 186; Mukherjee & Roy, 2017; Xia, 2016;Willems, 2018). There is a tendency that

leads to the accounting profession and accounting educators not from accounting education (Afiyah, 2018).

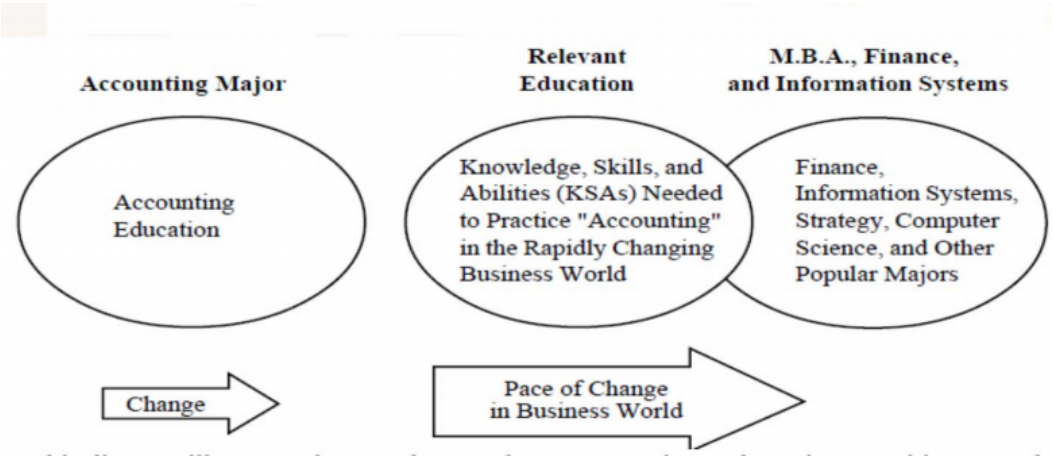


Figure 1.
Why Accounting Practitioner and Educators Would not Major in Accounting Again
Source : Afiyah, 2018

Two changes that have emerged and have caused accounting practitioners and educators not to choose the current accounting background because (1) accounting education has not changed much to adapt to changes in the business world, (2) changes that occur in the business world increase many changes in knowledge, skills and abilities. abilities (KSAs) that are needed to be carried out by an accountant that are also carried out by other than accountants such as low cost concepts, discipline, learning finance and also information systems. (Afiyah, 2018).

Al-Htaybat et al., (2018) and Holmwood & Servós, (2019) conducted research with the results that curriculum changes and changes in information technology practical learning patterns are needed. In addition, complementing the accounting curriculum with advanced IT knowledge and skills is a necessity. (Arens and Elder, 2006; Arnold and Sutton, 2007; Curtis et al., 2009; Pan & Seow, 2016). The development of business with the adoption of technology and automation causes accounting practices to become obsolete which requires a change in the direction of accounting education towards a new and different position from the previous one (Holmwood & Servós, 2019; Afiyah, 2018). The online learning process during the COVID-19 pandemic is part of increasing digital literacy for many parties. But on the other hand, there is a tendency for learning outcomes to decrease in effectiveness due to various obstacles. (detik.com). The research of Kusmaryono & Kusumaningsih, (2021) shows the effectiveness of distance learning as effective as face-to-face learning by 74%, who think it is more effective than face-to-face about 12% and 14% with mixed results.

Based on the foregoing, this study was conducted to evaluate the interest of accounting students in increasing digital literacy in connection with accounting automation and as a preparation and adaptation material to adapt to the changes that are happening. The research was conducted by socializing cloud-based accounting automation and practicing it in one month with guidance from the provider. Furthermore, an evaluation of the increase in interest was carried out and continued with the process of automating financial reports using a spreadsheet application equipped with a script program which was carried out in modular stages in the form of sales and inventory modules, purchases with their inventory, perpetual inventory processes and calculation of cost of goods sold, adjustment processes and financial reports. accompanied by a ratio analysis that is available automatically with simple interpretation. At this stage the main orientation is at the operator data entry level, but has been introduced to the design pattern and drafter of an accounting automation application so that it is expected to increase digital literacy. This research is experimental with a technical approach to learning that is carried out fully online by providing materials in the form of cases and guides that are synchronous and asynchronous. The novelty of this research is to focus on the technical learning of accounting computerized practices

that lead to the automation process through the introduction of simple algorithms and programming scripts so that financial report generation occurs automatically so that it is expected to increase interest in application design and other digital literacy.

Literature Review

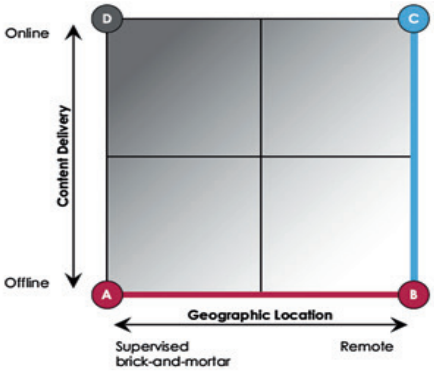
1. Accounting Computerisation and Automation

Accounting as an activity that occurs repeatedly with a large capacity is a significant activity to be automated (Deshmukh, 2006, p. 2). The automation process is developing continuously starting with the implementation of an enterprise resource planning (ERP) model with either a local area network (LAN) or a wide area network (WAN) connection with financial data and information still under the responsibility of the finance and accounting departments. The use of increasingly complex technology with complicated data management makes the existence of data centers and data management specialists accompanied by business demands that want ease of cross-regional transactions, making electronic data interchange (EDI) and electronic fund transfer (EFT) increasingly widely used, making the automation process the beginning of the process. transactions (Deshmukh, 2006, pp. 2–3). ERP is still a key instrument to improve efficiency, effectiveness and compliance with the company's operations and business activities (Mancini et al., 2016, p. 3). Currently, the new trend is towards information systems with a focus on the complexity of processing big data and unstructured information in innovative ways through the creation of flexible information system applications. A system that has the ability to meet the needs of strategic management and operational activities (Mancini et al., 2016, p. 3). The synergy between accounting information systems (AIS) and Information Technology (IT) requires a dynamic process with interactions between the two, with IT implementation at the operational level on transactional processing that is already based on data collaboration systems that will change systemically in the scope of management and the organization as a whole (Mancini et al., 2016, pp. 8–9). Changes that have a direct impact on the accounting profession are (1) Digitization and integration of vertical and horizontal value chains, (2) Digitization of product and service offerings, (3) Digital business models and customer access. While the transformations that take place and have an impact are (1) Artificial Intelligence (2) Blockchain (3) Cyber Risk (4) Big Data Analytic (Afiyah, 2018). Thus, the accounting profession should complement and improve its digital understanding and capabilities, including data analysis capabilities, information technology development and leadership skills to overcome future accounting conditions in the form of (1) cloud-based accounting data (2) Accounting is influenced by the power of using big data. (3) Accounting will integrate non-traditional financial information in modern systems (4) Accounting work is efficient and mobile (5) The role of accounting has changed radically (Afiyah, 2018). The responses needed for the preparation steps are (1) Investment in digital skills development (2) implementing new technology prototypes, learn by doing (3) International-based certification and digital skills education (4) Responsive to industry, business and technology developments (5) Curriculum and learning based on human digital skills (Afiyah, 2018). Meanwhile, Owens (2017) stated that the challenges of updating the ability of the profession in accounting firms include: (1) Applying fair value accounting on a newly developed piece of software (2) Tagging data using iXBRL for tax authorities (3) Using IT to collaborate with clients and across jurisdictions (4) Integrating data analytics as part of an audit approach and (5) Providing advice on cybersecurity gaps in financial reporting systems. Besides regulatory compliance, higher IT adoption rate among accounting functions is attributed to the push for improved productivity among accounting professionals. There has been increased investment in audit software and knowledge ((Pan & Seow, 2016). Advance information system capability is a very important requirement for accounting graduates (Evans et al., 2012). AICPA establishes a competency framework that the accounting profession must have the ability to adapt to information technology, and the AACSB (2014) includes business analytical skills in the AIS curriculum.

2. Learning Process and Educational Technology

Learning Process is a process that individuals or groups go through to acquire new knowledge and skills and ultimately influence their attitudes, decisions, and actions. This process includes activities using, adapting and reproducing structures or adjusting structures and involving mental processes and behavioral changes (IGI-Global). Educational technology is the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources. The use of new or existing technologies to enhance the learning experience in its various forms (Huang et al., 2019, p. v). The use of technology in the form of audiovisual aids developed in personal computer and network technology and then shifted to the use of various cellular and artificial intelligence technologies as well as virtual and augmented reality. The use of various technology-based media is part of the current educational process that allows cross-regional and cross-institutional learning processes or based on collaboration or e-collaboration systems (IGI-Global). The results of research by Moran et al., (2011) that faculties that apply web-based technology show (1) more than 80% believe that online learning tools can improve learning performance and outcomes, (2) around 60% believe that social media can have an influence on the delivery of learning management, (3) around 70% believe that collaborative networking can lead to the identification of best learning practices in learning management. Overall, the learning management community believes that the determining factor for the success of the learning process is the large variety of competencies of instructors/educators and delivery methods (Rubin, R. & Dierdorff, 2013).

Blended Learning is learning that involves technology in the learning process that allows individuals to learn in a physical location and also away from location via the internet with flexibility over time, place and speed of the learning process. A broader understanding involves all possible methods (Hew & Cheung, 2015; Horn & Staker, 2011). Research by Dwijonagoro & Suparno, (2019) also stated that the most effective was hybrid learning model in their research.



Point	Blended?	Example of program
A	No	Traditional brick-and-mortar school
B	No	Home school without online delivery
C	Maybe	Purely virtual school (also called cyber school and e-school). It only figures into blended learning if a student uses it to self-blend with a traditional campus.
D	Yes	Theoretical pure-play for blended learning (100% online and 100% supervised brick-and-mortar)
	Yes	Student learns through a mix of online/offline and supervised brick-and-mortar/remote

Figure 2.
Blended Learning Matrix
Source : Horn & Staker, 2011; Hew & Cheung, 2014

In carrying out online learning, there are several things that must be prepared in order to support the success of the learning process and outcomes, including (1) Institutional support, (2) Infrastructure readiness, (3) Content readiness, (4) Instructor readiness, (5) Learner readiness (Hew & Cheung, 2015, p. 8).

Based on the description above, the hypothesis made is

Ha1 = Accounting Computerization has direct effect to Intention to Contribute Accounting digitization
Ha2 = Accounting Computerization has direct effect to Learning Process
Ha3 = Learning Process has direct effect to Intention to Contribute Accounting digitalisation
Ha4 = Online Learning Readiness has direct effect to Intention to Contribute Accounting digitalisation
Ha5 = Online Learning Readiness has direct effect to Learning Process

Methods

This study uses a quantitative method that shows a causal relationship. Partial least square structural equation modeling (PLS-SEM) is used as a tool to analyze the theoretical conceptual relationship with empirical data (Hair et al., 2014). Indicators are arranged based on the reflective variables of each latent variable and intervening variable (Budhiasa, 2016, pp. 1–6; Hair et al., 2014). While the scale uses a semantic differential (Budhiasa, 2016, p. 16). The population in this study was around 175 participants who were divided into 4 groups of accounting computer learning processes that were designed in a modular transactional function with an orientation to entry level data skills, but each module was equipped and introduced to the accounting process in the form of automatic journaling accompanied by process algorithms and program language syntax. The experimental approach is used with three stages of the test process, namely the first stage is in the form of a pre-test of socialization and practice of cloud computing-based accounting computers with guidance from partner providers. The second stage is a post-test of cloud-based accounting computers and offline-based accounting computer pre-tests with a financial report automation approach and is transactional modular and financial statement analysis. The third stage is a post test of the learning outcomes. In the first pre-test the number of respondents was 134 participants, and in the second stage the number of respondents was 73 participants while in the third stage there were 94 participants.

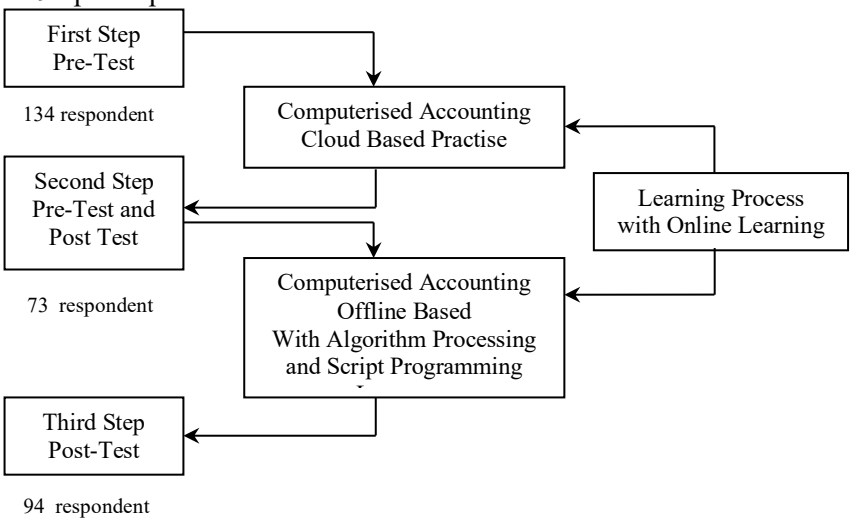


Figure 3.
Research Design

Comparison of the pre-test and post-test using descriptive analysis of the results of the respondents' answers, while the relational test was carried out in the third stage with a sample of 94 respondents using PLS-SEM. Testing through the outer model algorithm and inner model bootstraping.

Results

1. Descriptive analysis results in three stages of the test

From the first stage of the pre-test before socialization and training on cloud computing-based accounting computers, 133 respondents showed that the interest in increasing digital literacy in the accounting field was 17.29% (Table 2.)

Table 2. Pre-test Result – First Step

Description	%	R
Just To Know or Just Experience	6.02%	8
Improving Digital Skills and Trying to Become an App Designer	17.29%	29
Accounting Operators For Work or Business	76.69%	102
Amount	100%	133

Note: R-Respondent

Meanwhile, in the second test after participating in the practice of computer accounting based on cloud computing, the results showed that interest in digital literacy increased more than the pre-test in the first stage (Table 3) with a desire to know more about 89.04% and a desire to try 86.30%. . Meanwhile, the interest in becoming an accounting application designer was from 17.29% to 63.01%.

Table 3. Post-test Result – Second Step

Description	Positive Responses		Negative Responses		Amount	
	R	%	R	%	R	%
Learn More Digital Accounting	65	89.04 %	8	10.96 %	73	100 %
Trying More Digital Accounting	63	86.30 %	10	13.70 %	73	100 %
Become an Accounting Designer	46	63.01 %	27	36.99 %	73	100 %

Note: R-Respondent

The results of the third test (Table 4) after participating in a modular accounting computer practice exercise offline accompanied by the introduction of algorithms and process automation program scripts, the results obtained are the interest in accounting digitization which is relatively the same as the post-test second step after practicing cloud-based accounting computers. which is above 80%.

Table 4. Post-test Result – Third Step

Description	Positive Responses		Negative Responses		Amount	
	R	%	R	%	R	%
I want to learn more about programming for accounting or digital accounting applications	78	82.98 %	16	17.02 %	94	100 %
I feel the need for a Virtual Accounting lab (Virtual laboratory for Practice) with special training towards computerization or accounting digitization	79	84.04 %	15	15.96 %	94	100 %
I want to contribute to the development of computerized accounting or digital accounting	73	77.66 %	21	22.34 %	94	100 %

Note: R-Respondent

Table 5 shows some of the respondents' statements related to the learning process and digitalization of accounting as a support for the results of this study. Basically, respondents tend to realize that the accounting transformation towards digitalization of accounting is taking place in the industrial world and is also aware of the importance of increasing their digital literacy even though they feel that more effort is needed in terms of energy and time in the learning process (Statements no. 1, 2, 3, and 4 with a positive response score of more than 80%). In statement no. 3 shows that the iterative process is an important part of the learning process in the digitization of accounting. Statement no. 5 and 6 show that the process carried out in groups provides positive competitive motivation to support increasing digital knowledge and skills with a positive response score above 75%. In statement no. 7 positive response scores below 70% indicate an indication that there are still obstacles in digital accounting knowledge and skills that still require adaptation and habituation processes. Statement no. 8 with a positive response score above 80% indicates that the online learning model with Asyncronous is very helpful in the learning process of computerized accounting practices. Likewise, the use of content providers (Statement no. 9) provides a lot of support for increasing understanding and computerized accounting skills with a positive response score above 70%.

Table 5. Another Descriptive Results

No.	Respondent Statements	Positive Responses		Negative Responses		Amount	
		R	%	R	%	R	%

1.	I believe the Accounting Process is undergoing a transformation (very fast change) from manual-semi-computer-electronics accounting-Digital Accounting	79	84.04%	15	15.96 %	94	100.00 %
2.	I realize that I have to improve my computerization and digital skills, especially in the digital accounting and digital business fields	82	87.23%	12	12.77 %	94	100.00 %
3.	I feel the need for repeated practice in understanding more about computerization or digitalization of accounting	82	87.23%	12	12.77 %	94	100.00 %
4.	I feel that I need more time to improve my computer or digital accounting skills	80	85.11%	14	14.89 %	94	100.00 %
5.	feel that learning accounting computers by forming a team or group really helps my understanding and proficiency process compared to studying alone	72	76.60%	22	23.40 %	94	100.00 %
6.	By studying accounting computers in a group, it motivates me to do better and become a positive competition in improving my accounting computer skills	75	79.79%	19	20.21 %	94	100.00 %
7.	I feel I prefer computer-based or digital accounting processes compared to manual accounting processes	63	67.02%	31	32.98 %	94	100.00 %
8.	I find it very helpful in the process of learning computer-based or digital accounting practices with the practical instructions in the form of a movie	79	84.04%	15	15.96 %	94	100.00 %
9.	I use the internet a lot to support my understanding of computer accounting or digital accounting through content providers such as youtube	70	74.47%	24	25.53 %	94	100.00 %

Note: R-Respondent

2. **Outer Model-Algorithm Test Results**

The research model used in testing using PLS-SEM, is in figure 4.

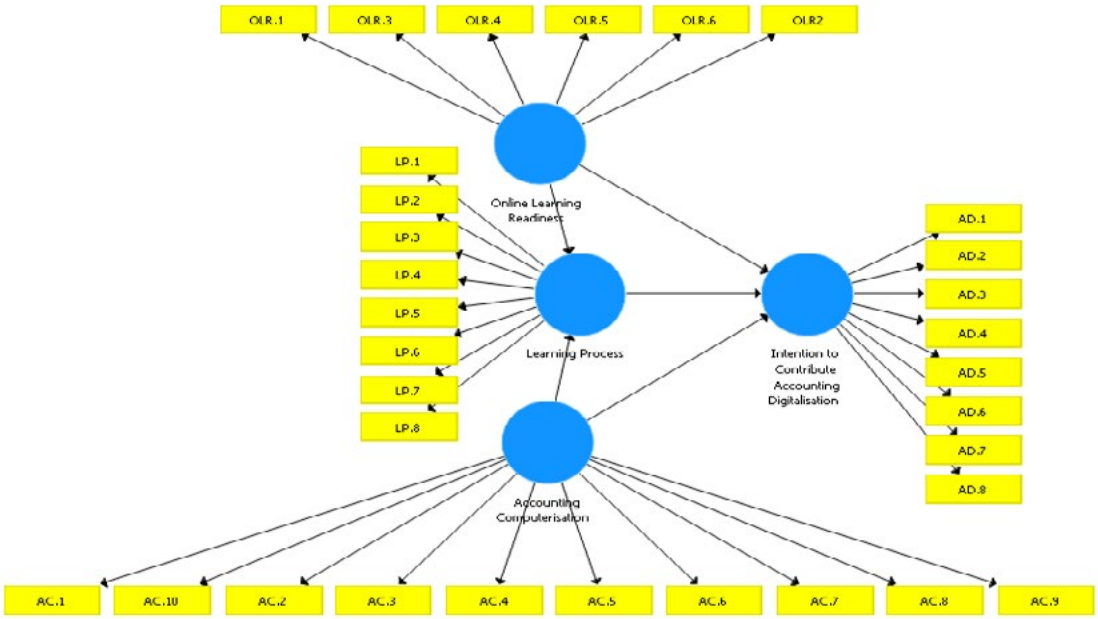


Figure 4.
Research Model

The results of the outer model-algorithm data processing process are shown in figure 5. The construct reliability and validity are shown in table 6.

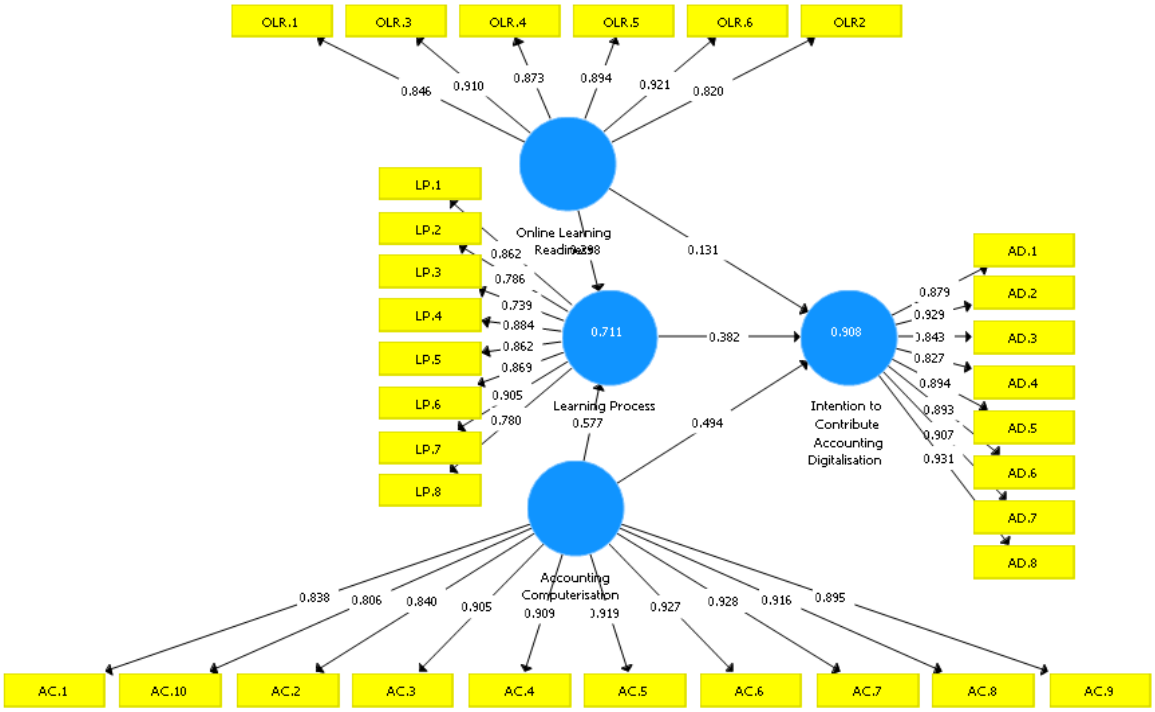


Figure 5.
Result of Outer Model Algorithm

Table 6. Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reability	Average Variance Extracted (AVE)
Accounting Computerisation	0.970	0.971	0.074	0.791
Intention to Contribute Accounting Digitalisation	0.962	0.963	0.968	0.790
Learning Process	0.938	0.944	0.969	0.702
Online Learning Readiness	0.940	0.944	0.953	0.771

The results of the loading factor measurement with average variance extracted (AVE) were carried out to measure the validity of each indicator in each of the latent variables (Table 6). The AVE value with a range of >0.7 indicates that the result is a covarie and the convergence validity is valid and indicates a positive relationship between the indicator and the variable. Similarly, the results of composite reliability (CR) are above 0.7 and Cronbach's alpha is above 0.6 and AVE is above 0.5 (Hair et al., 2014). The ability to explain the latent variable is more than 50% or above 70% for each indicator. Table 7. shows the results of the measurement of cross correlation or measurements between constructs diagonally with the criterion that the construct being compared must be of greater value than the construct being measured so that the indicator can be called a valid discriminant. This means that the measurement shows a better ability of the construction block compared to other construction blocks (Budhiasa, 2016, pp. 29–31; Hair et al., 2014).

Table 7. Discriminant Validity - Fornell-Larcker Criterion

	Accounting Computerisation	Intention to Contribute Accounting digitalisation	Learning Process	Online Learning Readiness
Accounting Computerisation	0.850			
Intention to Contribute Accounting digitalisation	0.847	0.848		
Learning Process	0.828	0.839	0.838	
Online Learning Readiness	0.841	0.846	0.783	0.848

Table 7. shows that the measurement of discriminant validity with heterotrait-monotrait (HTMT) is valid, which is above 0.85 (Henseler et al., 2009).

Table 8. Discriminant Validity - Heterotrait-Monotrait Ratio (HTMT)

	Accounting Computerisation	Intention to Contribute Accounting digitalisation	Learning Process	Online Learning Readiness
Accounting Computerisation				
Intention to Contribute Accounting digitalisation	0.847			
Learning Process	0.840	0.837		
Online Learning Readiness	0.832	0.825	0.827	

3. **Inner model-bootstrapping test results**

Hypothesis testing is done through the inner model-bootstrapping shown in table 8.

Table 9. Result of Hypothetical Test - Inner Model

	Path Coefficient	T	P Value	Hypothesis
Accounting Computerisation --> Intention to Contribute Accounting digitalisation	0.494	6.479	0.000	Ha1 Accepted
Accounting Computerisation --> Learning Process	0.577	4.988	0.000	Ha2 Accepted
Learning Process --> Intention to Contribute Accounting digitalisation	0.382	5.171	0.000	Ha3Accepted
Online Learning Readiness --> Intention to Contribute Accounting digitalisation	0.131	1.966	0.050	Ha4 Rejected
Online Learning Readiness --> Learning Process	0.298	2.668	0.008	Ha5 Accepted

Referring to the t-test criteria with a value above 1.65 for a significance of 0.05 and t above 1.96 for a significance of 0.1 and a p value having a value below 0.05, the hypothesis is accepted (Hair et al., 2014). If the path coefficient is close to 1, the significance is positively strong, and vice versa if it is close to -1 then the negative significance is strong. One hypothesis was rejected with a p-value of 0.05, while the other was accepted with a positive significance. Table 10 shows the measurement results of R square with reference to the criteria (R2) 0.67 potential, 0.33 average, 0.19 weak (Chin, 1998; Hair et al., 2014). The ability to explain from Intention to Contribute Accounting Digitalization is 90% while the Learning process has the ability to explain at 71%. So that both have the potential to explain.

Table 10. Result of R Square

	R^2 (R Square)	Determination
Intention to Contribute Accounting Digitalisation	0.908	Potential Determination
Learning Process	0.711	Potential Determination

In table 11, the test with f2 (f square) to measure the effect of the construct with criteria 0.02 includes the small size effect, 0.15 includes the medium size effect and 0.32 includes the large size effect (Cohen, 1988). Which has a large effect sequentially, namely Accounting Computerization on Intention to Contribute Accounting digitization, Learning Process on Intention to Contribute Accounting digitization and Accounting Computerization on Learning Process shows that the contribution to Intention to Contribute Accounting digitization directly from accounting computerization or through the learning process has an effect the big one. In contrast to online learning readiness, which has a small effect both on the learning process and on the Intention to Contribute Accounting digitization, which can be caused by the online learning process that has been running for a long time so that respondents are used to and focus on computerized accounting and automation processes.

Table 11. Result of Inner Model - f Square

	f Square	Effect
Accounting Computerisation --> Intention to Contribute Accounting digitalisation	0.580	Large Effect
Accounting Computerisation --> Learning Process	0.337	Large Effect
Learning Process --> Intention to Contribute Accounting digitalisation	0.458	Large Effect
Online Learning Readiness --> Intention to Contribute Accounting digitalisation	0.050	Small Effect
Online Learning Readiness --> Learning Process	0.090	Small Effect

Figure 6 shows the results of the inner model with bootstrapping

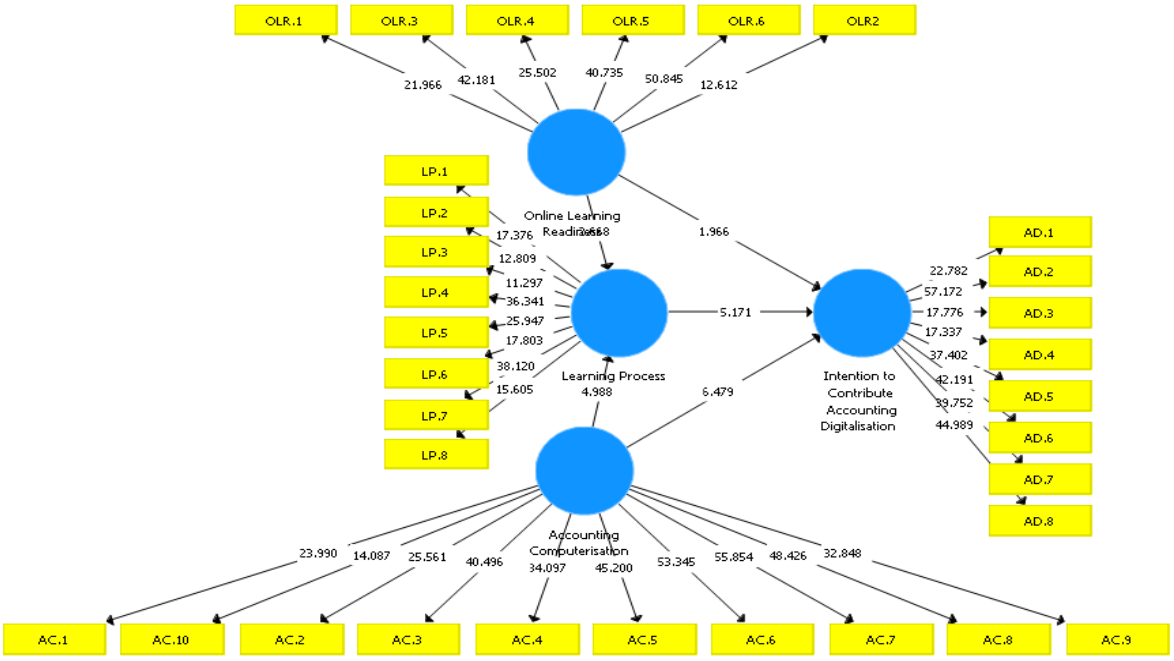


Figure 6.
Result of Inner Model Bootstrapping

Discussion

The Effect of Accounting Computerisation to Intention in Contributing Accounting digitalisation

The results of the inner model on hypothesis testing show that the direct effect is proven or accepted with a positive significance of 0.494 or almost 50%, this situation can be considered moderate when compared to the criteria close to 1, the stronger the significance (Hair et al., 2014). If it is seen from the results of the responses in the pre-test and post-test with relatively large results, which are above 80% positive responses to contribute to digital accounting (table 3 & table 4), the results of the 50% significance are less supportive. There is a possibility that the test that produces 50% significance is carried out in the third stage where the learning process is carried out accompanied by the accounting process algorithm on the application system accompanied by the syntax of the automation program, causing difficulties for respondents who all have accounting and management backgrounds. So the results from hypothesis testing are somewhat contradictory to the results from the pre-test and post-test. In addition, because the learning process is carried out fully online so that the need for interactive when a problem solving case occurs is the cause. The ideal best learning process is hybrid learning, not just online learning (Dwijonagoro & Suparno, 2019; Kwok et al., 2015, p. 113; Sangster et al., 2020).

The Effect of Accounting Computerisation to Learning Process

This relationship is seen from the results of the inner model on hypothesis testing (table 9.) with the largest path coefficient of 0.577 or close to 60% indicating the significant strength of the influence of accounting computers on the learning process. Judging from the results of f square (table 11.) which is included in the large effect category with a value of 0.337. from table 5 related to the learning process there are results that show a figure of 76.60% and 79.79% for the state of the learning process with the team in supporting individual understanding which is in line with Bergdahl et al., (2020) view related to the learning process with a team that can increase motivation with positive competition among the team. Likewise with the inquiry-based learning approach pattern (Masterson, 2020) respondents explored through content providers by 74.47% and support for Asynchronous movies as additional instructions in solving cases with results of 84.04% showing that a learning environment with the support of various computer tools can stimulate desire for independent exploration (Masterson, 2020). In addition, independent exploration can improve the digital literacy of the individual concerned (Bergdahl et al., 2020). From table 5 it can also be seen that the respondent's condition for the need for more time to learn digital accounting is 85.11% and requires a repeated process of 87.23% accompanied

by the condition of respondents who state that they prefer computer-based or digital accounting processes compared to manuals by 67.02%, indicating that the respondent's condition is still face difficulties in understanding accounting automation and accounting digitization. With a figure of 67.02% even though it is included in the positive response, but it is still not optimal, it shows that in the learning process there are still obstacles that require a redesign as stated by Pincus et al., (2017) in overcoming the gap in the development of knowledge and technological capabilities with readiness for accounting automation requires changes to what we teach (curriculum) and how we teach (pedagogy). From table 4, the situation of respondents who feel the need for a virtual accounting lab is 84.04% and the desire to learn more is 82.98% and table 5 with a figure of 84.04% is related to respondents' awareness of the accounting transformation process towards digitalization, it can be concluded that respondents basically willing to understand more in relation to the digitization of accounting, but with the figure of 77.66% in table 4 to contribute to the digitization of accounting has decreased, it shows as if there is a reluctance from respondents to directly contribute

Conclusion

The design of the learning process to lead to the automation or digitization of accounting greatly influences the intention to contribute to the development of automation and digitalization of accounting. Especially the socialization of conditions that occur in the industry, the iterative learning process (Diffusion) on accounting automation, the use of an inquiry-based learning approach and additional supporting materials such as asynchronous movies and others.

Limitation

This research was conducted with a full online learning process. Ideally it is done with blended learning or hybrid learning with settings on active interaction patterns with participants. The limited interaction causes a lack of communication, especially when participants have difficulty solving cases.

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Policy Analysis to Improve the Micro Financing of *Kredit Usaha Rakyat (KUR)* in *PT Bank Jabar Banten, Tbk* Using System Dynamic Models

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Abstract
Small Medium Enterprises (SMEs) experience difficulties to access financing. Therefore, government tries to persuade the bank through government credit guarantees. KUR is a government program to finance the SMEs which have the feasible business but not bankable. KUR is a government credit guarantee program that guarantees 70 % of KUR bad loans through credit guarantee institution. Even though the bad loan is 70% guaranteed but 30% of bad loan is bank losses. Hence bank becomes reluctant to distribute the credit due to increasing number of non-performing loan. This study aims to improve the micro credit (KUR) and decreasing the non-performing loan through some policies analysis. To analyze the policy, system dynamic model is proposed. The previous researches are using credit scoring and financial statement to analyze credit assessments, but it is considered less satisfying when related to time because company performance changes over time and it is driven by delays and feedback in the process. This research studied not only how to get ease access for loans but also resolve the effect of ease access through mitigation credit risk.
Keywords: **SME credit, Micro Financing, Bank policy, System Dynamics, Credit requirements**

1. Introduction

Banks have an important role in a country. It drives the economic sector of a country with lending activity. It is proven that lending activity helps financing the micro and small medium enterprises (SME's). With a strong financing through micro and SME credit service, it can help their business grow and develop. The development of micro and SME can help increase GDP of the country. According to Ayyagari, et al. (2007) stated that in countries with high income, SMEs contribute 50% of the average GDP. Considering the importance of SMEs for the country's development, government tries to promote the SMEs improvements. The improvement is needed to overcome the SMEs obstacle. The biggest obstacles in SMEs are financing and management. Therefore to overcome the financing obstacle, government make some policy in many schemes such as credit guarantee program, direct lending, credit mediation and export finance guarantees (Holton et al, 2013).

Indonesian government also realizes the importance of SMEs to the country, therefore government try to improve the SMEs financing through Kredit Usaha Rakyat (KUR). KUR is credit program for SMEs with feasible business but not bankable. Government was guarantee 70% of credit defaults in KUR through credit guarantee institution. KUR was launched by government but the fund resource is derived from banks. In distributing the fund to SMEs, banks must apply the precautionary principles to select the proper debtors. This happen because the 30% of credit default is bank loss. To avoid the credit default, banks set rigorous credit requirement and meticulous credit analysis to assess SMEs' credit applications. The banks requirements make SMEs difficult in access the credit.

Those issues were forcing banks to take the policy that can be a win-win solution both for SMEs and banks. Banks is needed to fix the problem in many ways. Therefore this study is conducted to address those issues regarding SMEs credit. The aims of this study are to explain the KUR mechanism that represent the existing condition of KUR in PT Bank Jabar Banten, to identify estimated policies that can be implemented by PT Bank Jabar Banten to increase KUR, and to determine the mixed policies that have the most optimal effects on increasing KUR and decreasing non-performing loan by KUR. This study analyze credit policies using system dynamics model to improve the situation. These problems are dynamics and non-linear, because it is involve feedback and delays. The problems are also involving the interaction with its environment. It is need to identify the structure changes so we can give the effective policy. The previous research did not convey these entire things; therefore it can be misleading especially when we must deal with uncertainties.

2. Literature Review

Small Medium Enterprises (SMEs) are defined as non-subsidiary, independent firms which employ less than a given number of employees (http://www.oecd.org/regional/leed/). The term SME covers a wide range of definitions and measures, varying across countries and between the sources reporting SMEs statistics. Some of the commonly used criteria are the number of employees, total net assets, sales and investment level.

SMEs are usually defined by size. In some developing countries which have smaller business, SMEs are categorized as those that have less than 100 to 250 employees (Biggs, 2002). The definition of SMEs can be categorized by its employees. Micro business is the business that has less than 10 employees. Small business has 10-49 employees. While medium-sized business has 50-249 employees (Holton, 2008).

World Bank defines SMEs by size of employee, income and assets. The Table 2.1 show SMEs size by employees, income and assets based on World Bank.

Table 2.1- Definition of Micro, Small and Medium Enterprises

Business size	Employees	Income	Asset
Micro	<10 person	< 100.000 USD	< 100.000 USD
Small	10 – 30 person	100.000 – 3.000.000 USD	100.000 – 3.000.000 USD
Medium	30 – 300 person	3.000.000 – 15.000.000 USD	3.000.000 – 15.000.000 USD

(Source: World Bank Organization)

In Indonesia, the definition of SMEs are define in Table.2.2

Table 2.2- Definition Micro, Small and Medium Enterprise in Indonesia

Business size	Employees	Asset (not including land and building)	Income (annual)
Micro	Less than 3 person with non-paid employee	< 50.000.000	< 300.000.000
Small	3 – 5 person	50.000.000 – 500.000.000	300.000.000 – 2.500.000.000
Medium	20 – 29 person	500.000.000 – 10.000.000.000	2.500.000.000 – 50.000.000.000

(Source: Act no 20 year 2008 about SMEs and Badan Pusat Statistik)

SMEs and Financing Obstacle

The global financial crisis of 2007-2008 and the previous crisis have worsened the difficulty faced by SMEs in Accessing bank credit. Financial institutions credit supplies have shifted due to their risk aversion, driven in part by increasing of non-performing loans on their books (Holton, 2013).

SMEs generally face more difficulty accessing credit than larger firms due to their capacity (i.e. lack of an agency credit rating, or unavailability of relevant financial information), their reliance on local markets, lower volume of tangible collateral, and more uncertainty especially for younger firms.(Holton, et al, 2013).

The evidence across country show that SMEs have more constrained in their operation and growth than large enterprises. Access to financial services considers the most important among the constraints. (Ayyagari, et al, 2008). Other constraints such as high interest rates, bank bureaucracies, collateral requirements, and lack of access to operations finance, those constrains affect firm growth significantly (Beck, et al, 2005). Figure 2.1 show adversely affected by those obstacles and the effect to firm's growth for each enterprise (Khodabakhshian, et al, 2013).

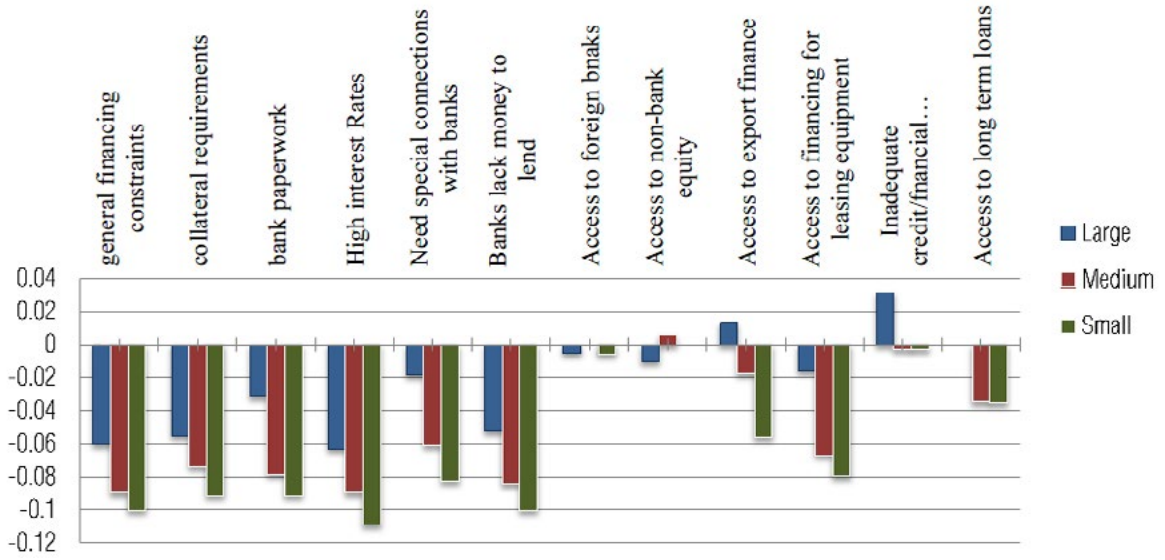


Figure 2.1 Effect of various obstacle experiences by SMEs (Khodabakhshian, et al, 2013)

Policy toward SMEs

The small firms have potential to grow into medium and large enterprises and contribute to the economy. However the market failures create an uneven playing field between firms of different sizes. Beck (2007) justifies the need for policy reforms and infrastructure improvement in order to create a more even playing field between firms of different sizes. Government as policy maker takes an important role to improving SMEs.

Beck, et al (2008) noted that bank loans will affect the improvement of SMEs performance positively. Therefore the most necessary policy that had to be made is the policies to overcome financing obstacle experienced by SMEs. Some countries make policies to foster SMEs in term of financing. Irish government for example they made policy in two categories, those that attempt to stimulate bank credit and those that attempt to develop alternative non-funding resource to SMEs (Holton, et al, 2013). Holton (2013) summarize the policies in Table 2.3.

Table 2.3- Government policies across the countries in financing SMEs.

Policy Aimed at Stimulating bank credit flow	Policy aimed at providing non-bank alternatives
● Government guarantees on default risk on SMEs ● Bank lending targets ● Credit mediation ● Export finance guarantees	● Peer-to-peer lending platforms; Crowdfunding ● Retail bond markets ● Direct lending to SMEs ● Direct export financing

Source: Holton, et al (2013)

They make policy aimed to improving credit flows to SMEs. Table 2.3 is the chronological policy aimed to improving credit flow to SMEs in Ireland.

Table 2.4-Chronological of Irish government policy to improve SMEs financing

Year	Policy Initiatives
Dec 2009	Credit Review Office (CRO), set up to mediate on disputes between lenders and prospective SME borrowers who have been refused credit.
2011	SME lending targets for AIB and BoI of €3bn, €3.5bn and €4bn each for 2011, 2012 and 2013, respectively. To be reported on by the CRO.
Jan 2012	Code of Conduct for Lending to Small and Medium Enterprises.
Q3 2012	Microfinance Ireland. Loans between €2k and €25k to firms with less than 10 employees. Fund size €90m.
Q4 2012	Temporary Loan Guarantee Scheme. €150m per year available over three years for firms with specific characteristics that are unable to access bank financing.

Q1 2013	Involvement of the National Treasury Management Agency in provision of finance from National Pension Reserve Fund to the real economy through partnership with private sector investors, comprising one credit fund and two equity funds: • SME Credit Fund (€200m; €450m*) • Two equity funds: SME Equity Fund (€125m; €350m); SME Turnaround Fund (€50m; €100m)

(Source: Holton, et al, 2013)

One of Malaysian government policies to improve SMEs financing is the Credit Enhancer Scheme. It is a new scheme to assist SMEs who have viable projects but lack the collateral to access loans from financing institutions. They guarantee 70% of loan and give guarantee fee based on SMEs risk profile (Devinaga, et al, 2012).
Some efforts to increase SMEs financing are also carried out by the Indonesian government. They also make some policies to improve SMEs with several credit schemes such as government direct lending and government credit guarantee. The credit that guarantee by government is Kredit Usaha Rakyat (KUR). The credit guarantee was carried out by Asuransi Kredit Indonesia (ASKRINDO) (www.komite-kur.com).

Kredit Usaha Rakyat (KUR)
KUR is one of Indonesian government programs to address financing obstacle experienced by SMEs in Indonesia. KUR is a credit scheme introduced by the government to the SMEs which dealing with financing problem for those feasible business but not bankable. It means that the business has good business ability to refund the loan but do not have the sufficient requirement to access bank loan yet (www.komite-kur.com). Although KUR is a government program but the funds that are used come from banks. KUR implemented by both local and national government bank. Table 2.4 is list of bank that implemented KUR in their business.

Table 2.5- List of bank that implemented KUR

List of Bank that Implement KUR	
1. Bank Rakyat Indonesia (BRI)	2. Bank Jabar Banten
3. Bank Negara Indonesia (BNI)	4. Bank Jateng
5. Bank Mandiri	6. Bpd DIY
7. Bank Tabungan Negara (BTN)	8. Bank Jatim
9. Bank Syariah Mandiri (BSM)	10. Bank BPD Bali
11. Bank Bukopin	12. Bank NTB
13. Bank Negara Indonesia Syariah (BNI Syariah)	14. Bank NTT
15. Bank Aceh	16. Bank Kalbar
17. Bank Sumut	18. Bank Kalteng
19. Bank Riau Kepri	20. Bank Kalsel
21. Bank Nagari	22. Bank Kaltim
23. Bank Jambi	24. Bank Sulut
25. Bank Sumsel Babel	26. Bank Sulteng

27.	Bank Bengkulu	28.	Bank Sultra
29.	Bank Lampung	30.	Bank Sulselbar
31.	Bank DKI	32.	Bank Maluku
33.	Bank Papua		

(Source: www.komite-kur.com)

There are general requirement set by bank for accessing KUR as follow:

1. The debtor have not receiving credit / financing both working capital loan and / or investment loan from any banks and not receiving any government loan at the time which can be proven by central Bank Indonesia debtor information system at the time when application for credit / financing proposed;
2. Being allowed to have consumer credit and productive credit.
3. If the SMEs still has a loan balance recorded on Bank Indonesia Debtor Information System but they have paid off the loan then they necessary to have Certificate paid off from previous bank
4. For SMEs whose going to access KUR, either channelled directly or indirectly from the bank, they are not necessary to be checked in debtor system information. (www.setkab.go.id).

Central Bank of Indonesia pointed that financing obstacle experience by SMEs in accessing KUR cause by several reasons, as seen as follow:

1. Lacking socialization to the community
2. KUR Interest rates are still quite high perceived
3. Delay in payment of claims of insurance agency
4. Trouble finding the debtor in accordance with the criteria and requirements
5. There is a dispute of some provisions of KUR.

Several Research in SMEs and Banking

Many researches have done on development of SMEs through bank financing; most of the studies suggest better lending assessment and decision for SMEs. The research was conducted by Moscardani, et al (2005), Kovari and Pruyt (2013), Khodabakhshian, et al (2013) Frame, et al (2001), Devinaga and Tan (2012), and Holton, et al (2013).

A report by McKinsey & Co. estimated that SMEs loan only for 7% of the total value of loans, bonds and public equity outstanding (Stein, P., Goland, T., & Schiff, R. 2010) . The reason of that small potion is because lending to SMEs is riskier. It makes SMEs have to fulfill the complicated requirements set by the bank. The requirement is needed so bank can reduce the loan default (Kovari 2013). Evaluating new bank loans has been considered as one of the main dilemmas to managers that banks have to deal with in order to reduce the probability of default (Moscardini 2005).

Nowadays, banks used many ways and tools to decrease credit default or non-performing loan. One of the tools is using credit scoring. Credit scoring is a process to assess borrower by estimate the borrower's future loan performance (Feldman 1997). A number of credit scoring models that classify consumer loan applications have been developed to aid traditional judgment methods. The credit scoring system has an effect on the lending decision and the companies. It is lowers information costs between borrowers and lenders and increases the portfolio share of small business loans (Frame 2001.). Credit scoring is considered less satisfying when related to time because company performance is change over time and it is driven by delays and feedback loop in the process and interaction with the environment (Kovari, et al, 2013).

Mari and Reno (2004) built the model that illustrate a strong procedure which could be useful for estimating models for bank loans for different economic sectors (Mari and Reno 2004). It is assumed that banks have historical data and default probabilities. Alongside these advantages there are also shortcomings of their models. This model is no feedback involved and there is no scenario in the future (Moscardini 2005).

Other analysis method for credit assessment and decision is show by Moscardini, et al, 2005; they analyze the performance of SMEs through financial statement and financial ratio (Moscardini, et al, 2005). The study that conducted by Powell and Dent Micallef (1997) in Devinaga (2012) had indicated that calculating the performance by using ROA might be a tiring exercise for SMEs (Devinaga 2012).

Another study is needed to rethinking of risk strategies for bank. It is needed to mitigate the risk of SMEs loan (Ernst & Young. 2010). Current modeling approaches do not reflect these features; therefore they can be misleading especially when a broad range of uncertainties must be evaluated (Kovari 2013). These limitations were already documented by Forrester (1961). Forrester (2003) in Kovari (2013) noted that system dynamic modeling can capture the feedback loops of a dynamic system and its stock-flow approach is well suited for representing company operations (Kovari 2013).

3. Research Methodology

The research methodology in this study is a descriptive-case study method with mental analysis of the models of the actors involved in the distribution system.

According to Moh. Nazir (1999), descriptive methodology is a method in examining the status of a group of people, an object, a set of conditions, a system of thought or a class of events in the present. The purpose of this descriptive research is to make a systematic, factual and accurate description, picture or painting of the facts, characteristics and relationships between the phenomena being investigated. Descriptive research studies problems in society, as well as procedures that apply in society and certain situations, including the relationship between activities, attitudes, views, ongoing processes and the effects of a phenomenon. . In the descriptive method, the researcher can compare certain phenomena so that it is a comparative study. Sometimes researchers carry out classifications, as well as research on phenomena by setting a standard or a certain norm so that many experts call this descriptive method a normative survey. With this descriptive method also investigated the position (status) phenomena or factors and see the relationship between one factor with another factor. Therefore, the descriptive method is also called a status study. Descriptive method also wants to study norms or standards, so this descriptive research is also called a normative survey. In the descriptive method, normative problems can be investigated together with status problems and at the same time make comparisons between phenomena. Such studies are generally referred to as descriptive studies or research. The perspective of time that is reached in descriptive research is the present time, or at least a period of time that is still affordable in the respondent's memory. In brief the reseacrh metodhology are seen in Figure 3.1.

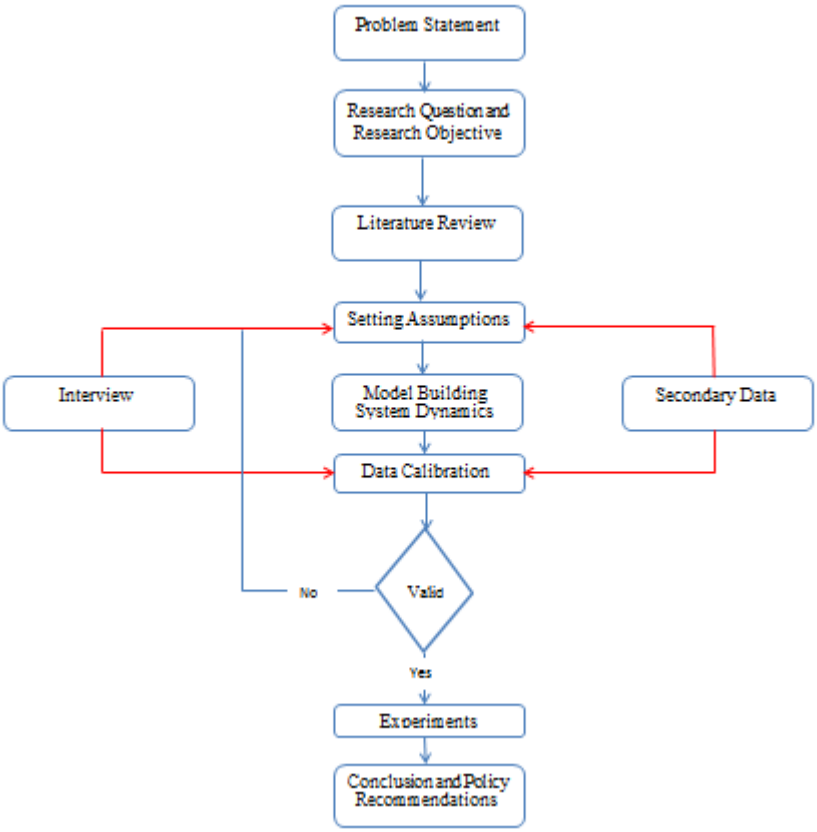


Figure 3.1.Research Method

4. Model Building

The aim of model building in this study is to construct the mechanism that relates among variables. Under the construct mechanism the dynamics of each variable can be analyzed in order to answer the research question. The mechanism was built using system dynamics approach. The main variables to be analyzed are the number of debtors, total credit, banks capital, and the number of non-performing loan. The number of debtors is hypothesized to be positively influence to the KUR channeling. Banks capital was analyzed because it is the source of funds for KUR. The number of non-performing loan was analyzed because the amount of NPL will decrease the channeling of KUR. The high number of NPLs will reduce the availability of capital and this will negatively affect the channeling of KUR. Figure IV.1 is the input-output system of credit. Modeling of those variables will be explained further in the next section.

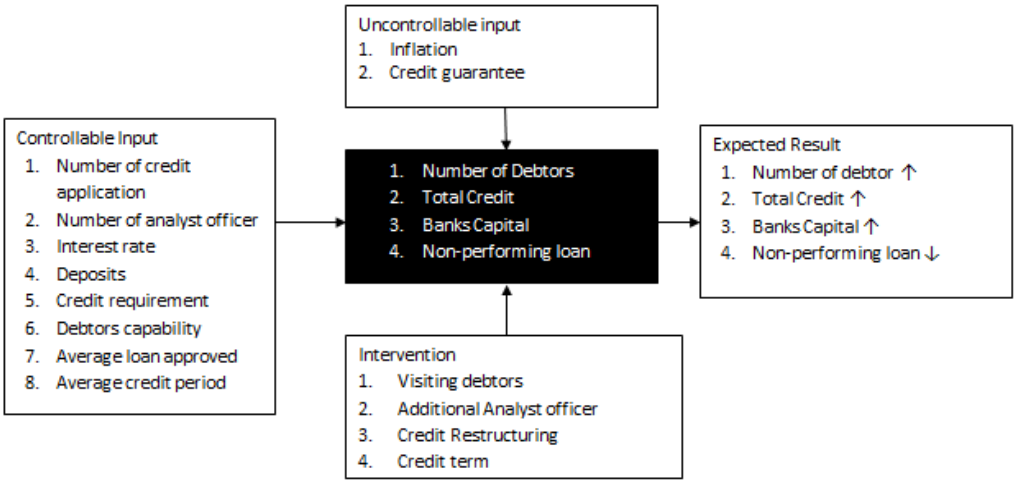


Figure 4.1-Input-Output System

4.1 Modeling the Number of Debtors

The number of debtors is the number of borrower who have loan at PT Bank Jabar. The number of debtors is affected by the number of Bank's Capital that is available to be loaned and the number of credit analysts. Let D is the total number of debtors at time t; Cap AO is the capacity of analyst officers in analyzing application per month, BC is the bank's capital, Ap is the total application, $\underline{Cr}$ is average loan approved per debtor and %App is the percentage application approved. The value of D (t+1) is as follows:

$$D_{t+1} = D_t + Max\left(\frac{BC}{\underline{Cr}}; Ap; Cap\ AO\right) x\ \%App$$

The amount of money that can be loaned by the bank is determined by CAR as follows:

$$BC = \%CAR\ x\ C$$

% CAR is a percentage of minimum requirement funds to be reserve by bank. The percentage of CAR that determine by central bank of Indonesia is 8% of banks capital.

The capacity of analyst officer (AO) in analyzing the application are determined by the number of AO and the capacity of each AO in analyze the application. Therefore, the capability of AO in analyzing applicant can determine as follow:

$$Cap\ AO = Cap\ x\ Num\ AO$$

Let $Cap\ AO$ is capacity analyst officer in analyzing application per month, Cap is capability each analyst officer in analyzing credit application per month, and $Num\ AO$ is the number of analyst officer at PT Bank Jabar.

The percentage of approved application is determined by the probability of percentage approval set by the bank requirement. The equation for the percentage application approve is as follows:

$$\%App = \%\ Col\ x\ \%\ Cpl\ x\ \%\ Cpty\ x\ \%\ Char$$

Let % App is the percentage application approved by PT Bank Jabar, % Col is percentage probability approved based on collateral, % Cpl is percentage probability approved based on capital, % Cpty is percentage probability approved based on capacity and % Char is percentage probability approved based on character.

Number of debtors will decease if the debtors can repay the debts. The repayment of the debt are determine by several factors, such as credit period, debtor payment capability, credit installment and the number of debtors. The decreasing number of debtors are delay between the number of debtor's inflow for an average credit period. This condition can be met if debtors payment capability more than debtors installment. The equation of debtor's installment as follow:

$$Ins = \left(\frac{TC}{\underline{CP}}\right) x\ (1 + I_{rate})$$

Let Ins is Debtor's installment, TC is total credit, $\underline{CP}$ is average credit period and I_{rate} is interest rate of credit.

Debtors payment capability is define as the capability to pay the loan. Debtor's payment capability is affected by debtor's willingness to pay the debt. Based on the interview, willingness to pay will increase along with the frequency visiting by AO. The frequency of visiting is twice a month. The equatin for debtor's payment capability is:

$$D_{Cap} = WTP\ x\ ((D_{inc}\ x\ \left(1 - \left(\frac{BR}{100}\right)\right) - LC)\ x\ D)$$

Let D_{Cap} is debtor's capability to pay the debt, WTP is willingnes to pay the debt, D_{inc} is debtor's income, BR is probability bussines risk, LC is living cost that debtor must pay for a month, and D is number of debtor's.

4.2 Modeling banks capital

Capital is the source of funds for financing KUR. In this model, the capital gained from third-party liabilities (savings, current accounts and time deposits) and bank's own capital. Banks capital are determine by several fator such as income, deposits, credit and expense. The availability of bank's capital can be formulated as follow:

$$BC_{(t)} = BC_{(t-1)} + \left(D_{In}\ x\ \underline{Cr}\right) + I_{In} + \ CPF - \ (CO + \ Exp + Loss)$$

Let BC is the number of Bank's Capital that is available to be loaned, D_{In} is new debtors, $\underline{Cr}$ is average loan per debtors, I_{In} is interest income, CPF is credit provision fee, CO is number of credit repayment, Exp is expenses and $Loss$ is the number of banks loss due to credit defaults.

4.3 Modeling total credit

Total credit is the numbers of loan that have been given to the debtors. Total credit is determines by number of new debtor's, average loans approved per debtor, credit repayment and credit write off. The equation of total credit as follow:

$$TC = D_{In}\ x\ \underline{Cr} - \ (CO + \ Cr_{WO})$$

Let TC is total credit that have been given to the debtors, D_{In} is new debtor, $\underline{Cr}$ is average loan approve per debtor, CO is number of credit repayment, and Cr_{WO} is credit write off by credit guarantee institutions.

4.4 Modeling Non-performing Loan

Credit defaults or non-performing loan occurs because of low debtor's capability to pay the loan. The non-performing loan will increase if debtor's payment capability less than credit installment. In the contrary, non-performing loans will decrease if debtors payment capability more than installment credit.

$$NPL_{(t)} = NPL_{(t-1)} + (Ins - D_{Cap}) - (D_{Cap} - Ins) - Cr_{WO}$$

Let NPL is number of non-performing loans, Ins is debtors installment, Cr_{WO} is credit write off by credit guarantee institutions and D_{Cap} is debtor capability to pay the loan.

4.5 Model Validation

Validation of this model is using several methods. First method is by comparing the actual data with the simulation results, whether simulation results have similar behavior with existing data. Second method is by direct structure test without running the simulation. Direct structure test was done with the expert opinion. The third method is by using Mean Absolute Percentage Error (MAPE). MAPE is used to determine the suitability of data between forecast with actual data. The formulation of MAPE as follow:

$$MAPE = \frac{1}{n}\sum \frac{X_m - X_d}{X_d} \; x \; 100\%$$

Let X_m is data from simulation results, X_d is actual data and n is number of data.
Lomauro and Bakshi (1985) sets the criteria for testing the accuracy of the model with MAPE as follow:

MAPE < 5 %: high accuracy
5 < MAPE < 10 %: accurate
MAPE > 10 %: not accurate

The MAPE test was tested for number of debtors and total credit.
According the MAPE test resulted that 9% for number of debtors and 10% for total credit, it means that the model is accurate to simulate the KUR condition.

5. Simulation different scenarios

Once the model is valid then the next step is to generate a range of scenarios. Different scenario was conducted to obtain feasible output. The simulation output of different scenario was analyzed to obtain the best policy to improve existing conditions. Simulation is done by taking the starting point in December 2011. Table 4.1 shows the scenarios that will be analyzed.

Table 4.1- Proposed Scenarios

Interventions	Scenario 1 Business as ussual	Scenario 2 Current bank policy	Scenario 3 Policy proposed by Khodabakhshian (2013)		Scenario 4 Proposed Policy	
Collateral Requirement	50%	50%	None	Comparing with applying credit Term	None	Comparing with applying credit Term
Capital Requirement	20% of loan	20% of loan	None	Comparing with applying credit Term	None	Comparing with applying credit Term
Capacity Requirement	30% of income	30% of income	None	Comparing with applying credit Term	None	Comparing with applying credit Term
Collectability Requirement	1	1	None	Comparing with applying credit Term	None	Comparing with applying credit Term

Interest Rate	22%	22%	22%	27%	Comparing with Different Interest rate
Number of AO	124	124	124	186	Comparing with existing AO
Visiting Debtors	none	twice a month Comparing without visiting debtor	none	twice a month	Comparing without cisiting
ASKRINDO credit guarantee	70% of NPL Comparing with no guarantee	70% of NPL	70% of NPL	70% of NPL	

6. Result Simulation

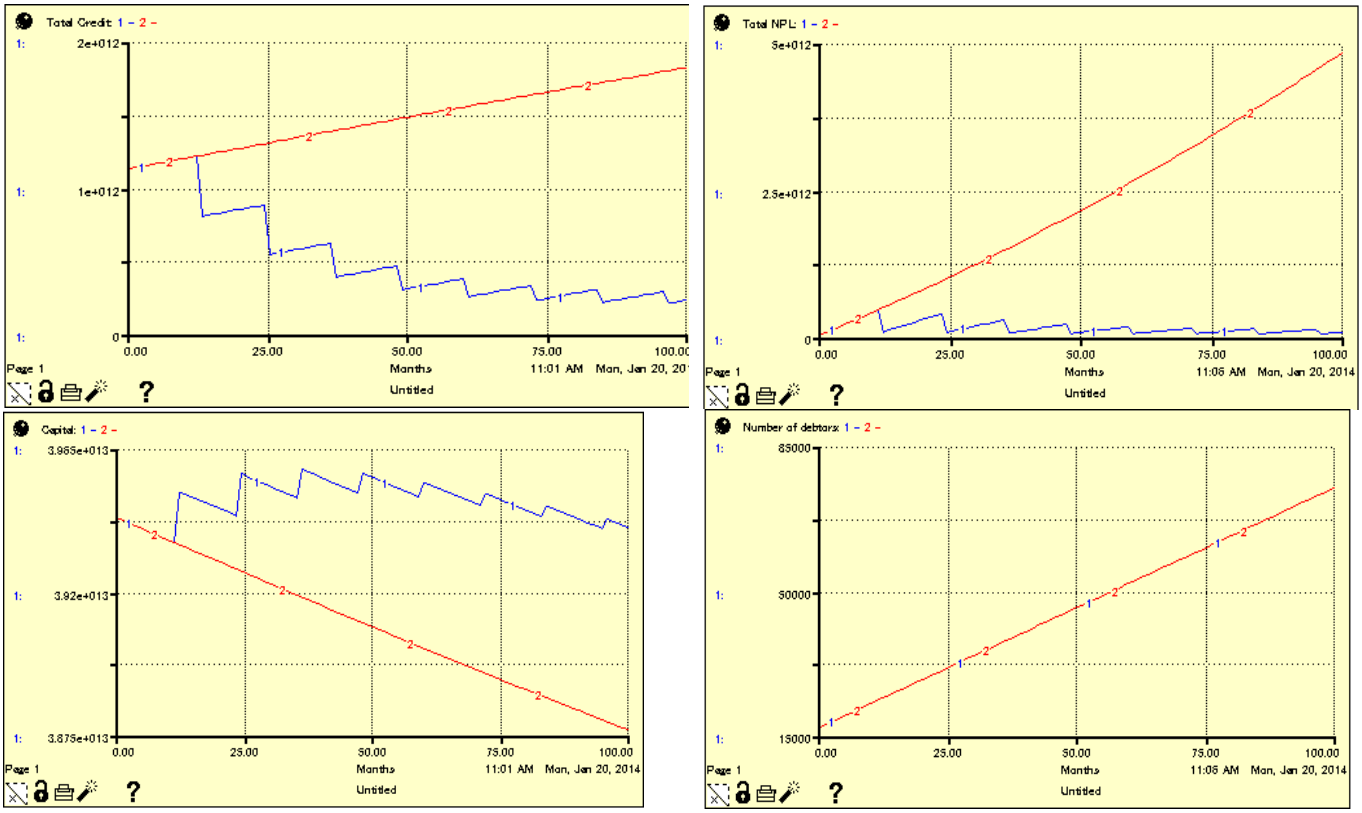
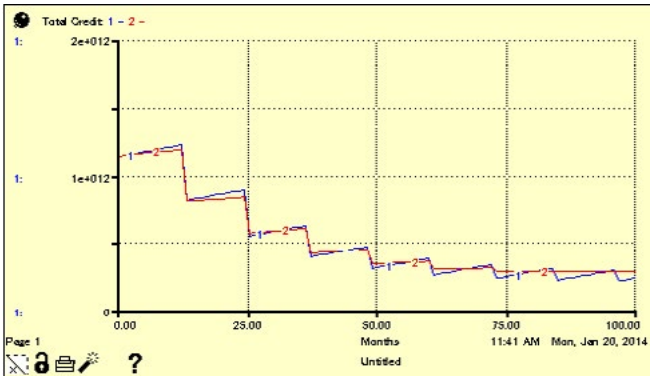


Figure 4.2-Line 1: Simulation result with ASKRINDO guarantee
Line 2: Simulation result without ASKRINDO guarantee

In the series of figures above shows the simulation results of scenario 1. It is show the total loans and non-performing loans decreased. This condition occurs not due to loan repayment but from the payment guarantee by ASKRINDO. The phenomena can be justified by the increasing number of debtors. Under the proposed mechanism the number of debtors outflow is determined by the number of debtors who pay their loan. Another impact that can be observed is the increasing bank capital in the beginning of the simulation but it is decline at the end of the simulation. This is happen due to the payment guarantee by ASKRINDO in the first of simulation but then dropped at the end of the simulation since of the 30% loss of bad debts which is not guaranteed by ASKIRNDO.


Total Credit: 1 - 2 -
2e+012
1e+012
0
0.00
25.00
50.00
75.00
100.00
Months
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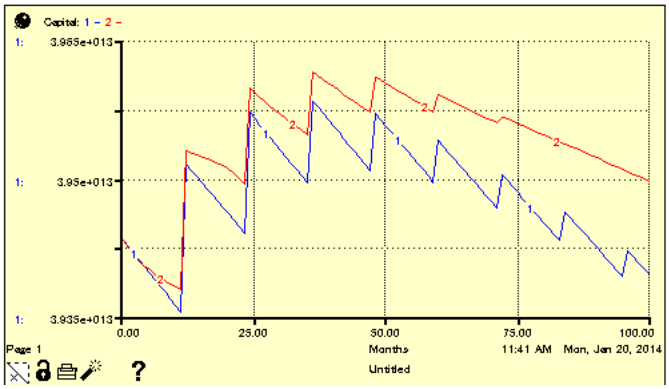
Capital: 1 - 2 -
3.965e+013
3.95e+013
3.935e+013
0.00
25.00
50.00
75.00
100.00
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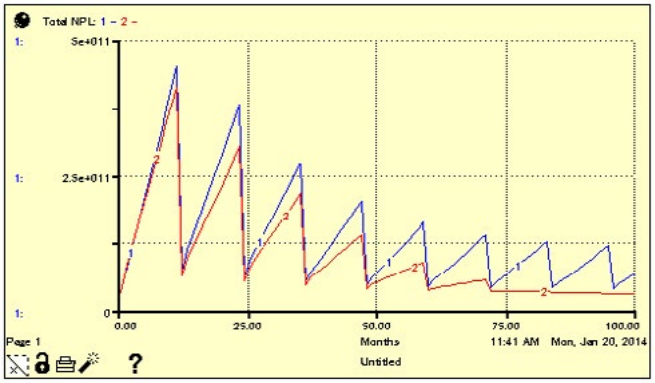
Total NPL: 1 - 2 -
5e+011
2.5e+011
0
0.00
25.00
50.00
75.00
100.00
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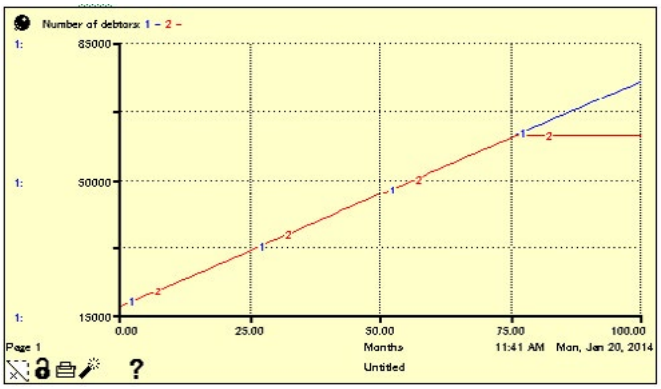
Number of debtors: 1 - 2 -
85000
50000
15000
0.00
25.00
50.00
75.00
100.00
Months
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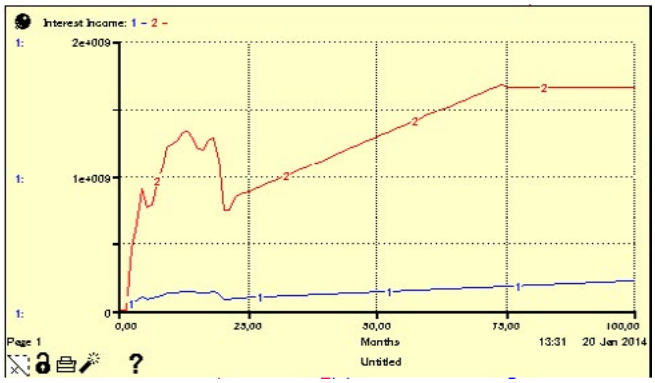
Interest Income: 1 - 2 -
2e+009
1e+009
0
0,00
25,00
50,00
75,00
100,00
Months
Page 1
13:31 20 Jan 2014
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Salary expense: 1 - 2 -
5e+009
2,5e+009
0
0,00
25,00
50,00
75,00
100,00
Months
Page 1
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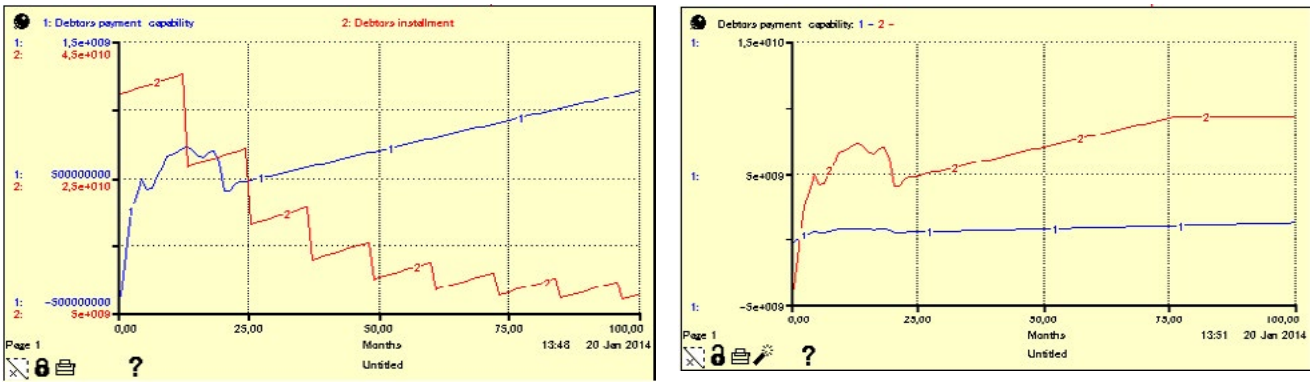


Figure 4.3- Line 1: Simulation result without visiting debtors

Line 2: Simulatin result with visiting debtors

The series of images above shows the simulation results of scenario 2 .The simulation results showed the increasing of total credit, although not significantly. Banks capital is increase because the visiting debtors can suppress the non-performing loan. The interest incomes also increase due to the repayment of credit. The effect of visiting debtors is cause the increasing of salary expense due to the additional number of collector. The increasing of salary expanse can be substituted with the increasing of interest income due to loans repayment. Loans repayment can stimulated by the visiting debtors. The increase of number of debtors is in the beginning of its simulation but then remained at the end simulation. This is happen because in the end of simulation (month 75) the debtor can pay the loans. This cause the debtor inflow equals with the debtors outflow. In the month of 75 the debtors can pay off the loan. This is due to the credit restructuring by extend the credit period if the debtor payment capability is less than the debtor installment. The simulation result show that debtors' payment capability is increasing due to the visiting debtor.

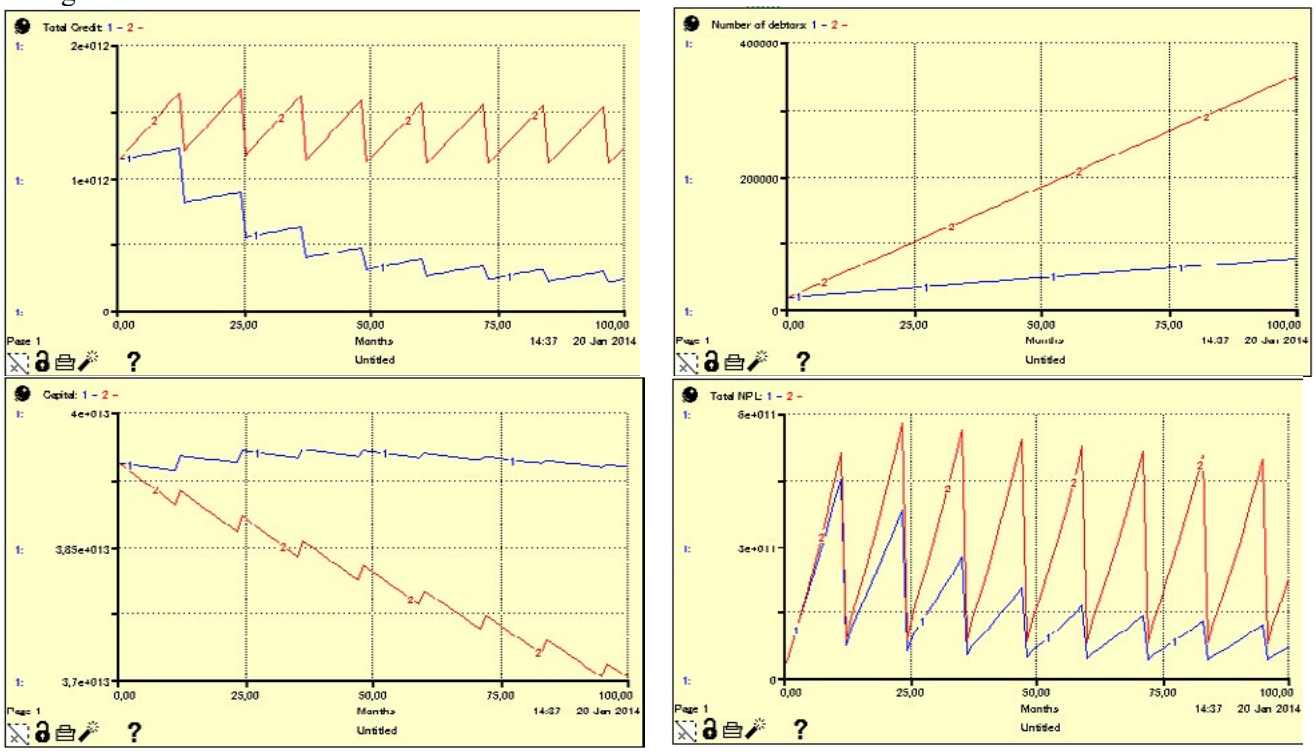


Figure 4.4-Line 1: Simulation result with existing requirement

Line2: Simulation results without any credit requirement

The series figures above are the simulation result from scenario 3. The simulation resulted that the determination of credit requirement will negatively affect the number of debtors and total credit. It can be seen with comparing the result between applying credit requirement and without applying credit requirement. Credit inflow and debtor's inflow will increase significantly without the determination of credit requirement. In the contrary this condition will resulted the increasing number of non-performing

loan because the increasing of credit inflow will cause the credit risk if bank did not anticipated the credit risk through risk mitigation. The number of bank capital will decrease due to 30 % bank loss of bad loans and also for credit distribution.

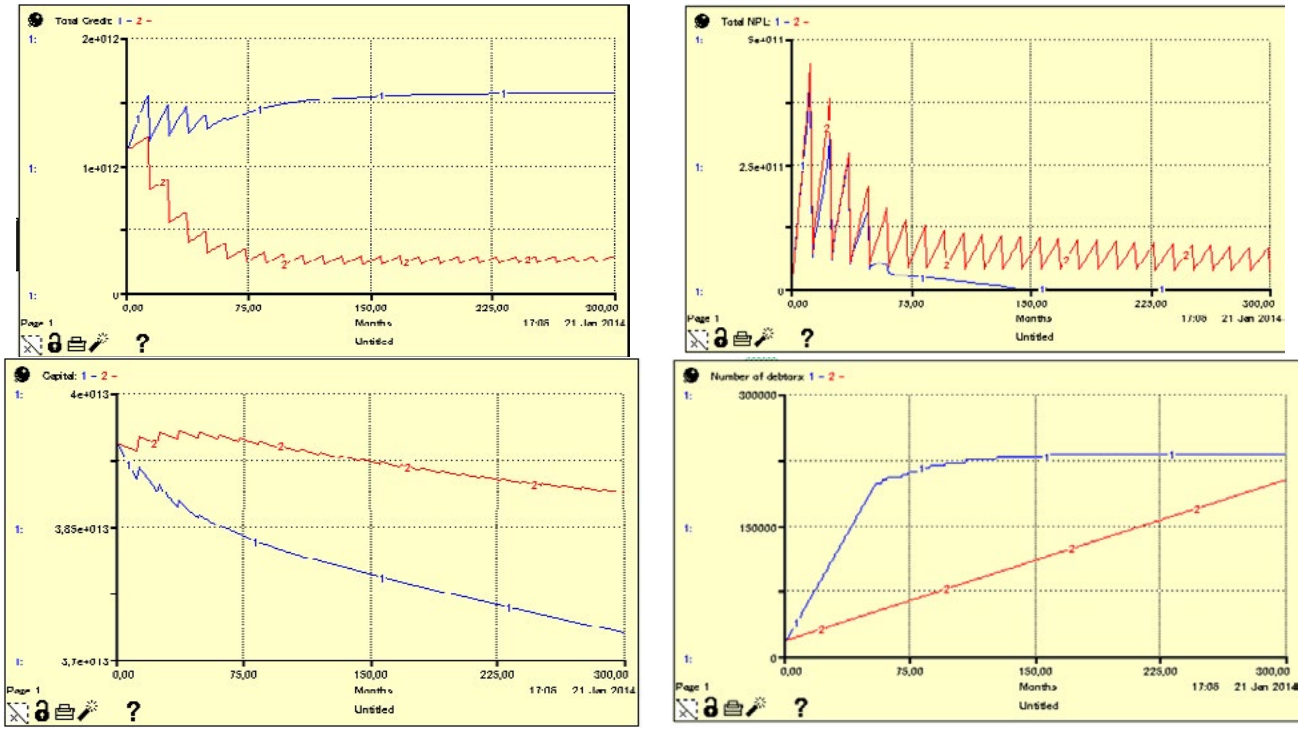


Figure 4.5- Line 1: Simulation result with visiting debtor but without credit requirement
Line 2: Simulation result without visiting debtor but applying credit requirement

According to the figures above, scenario 4 can be explained that total credit from first condition generate the increasing trend from time to time compared to the second conditions. Numbers of NPLs generated from first condition show declining trend despite the increasing number of total credit. These occur because the numbers of the debtor on the first condition can pay off the loan within 54 months. Number of debtors in first condition in scenario 4 generates better result than scenario 2 that apply existing credit requirements and visiting debtor. In scenario 2 the debtor can pay off the debt within 75 months. The numbers of bank capital also generate increasing number due to increasing interest rates. The number of new debtor and total credit can also increase by the additional of analyst officer. The increasing of number of debtors not affected the non-performing loan as long as the bank doing debtors visiting frequently. The Figure 4.6 and 4.7 illustrates the results of scenario 4 from first conditions compared with the result from the addition number of AO.

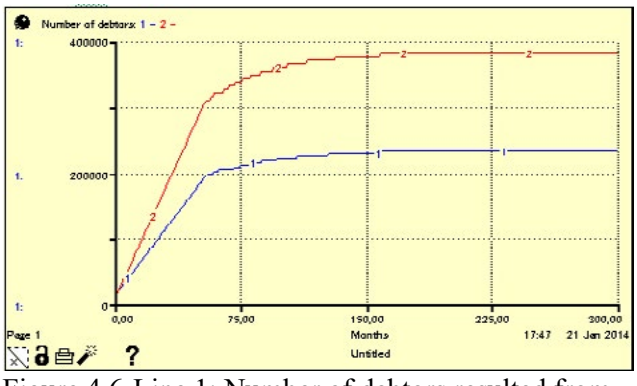


Figure 4.6-Line 1: Number of debtors resulted from first condition

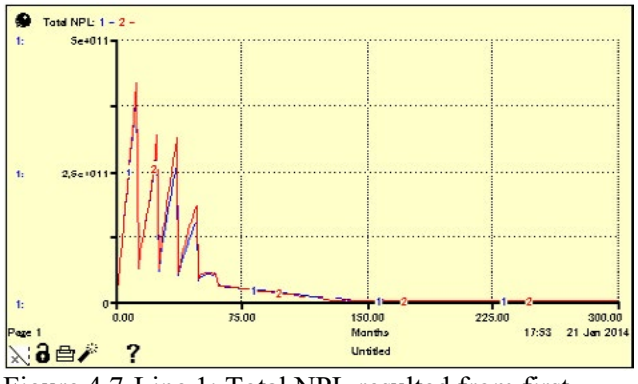
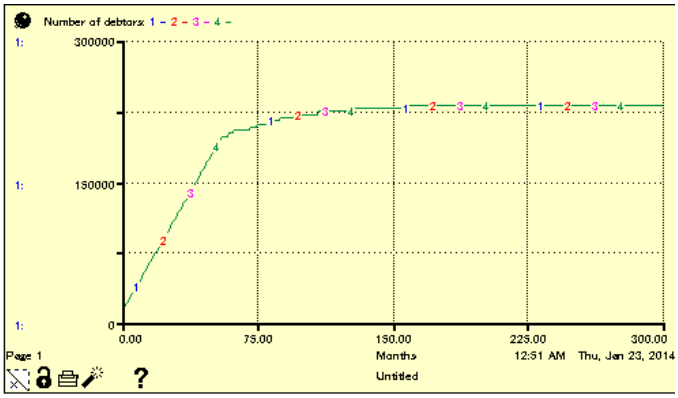


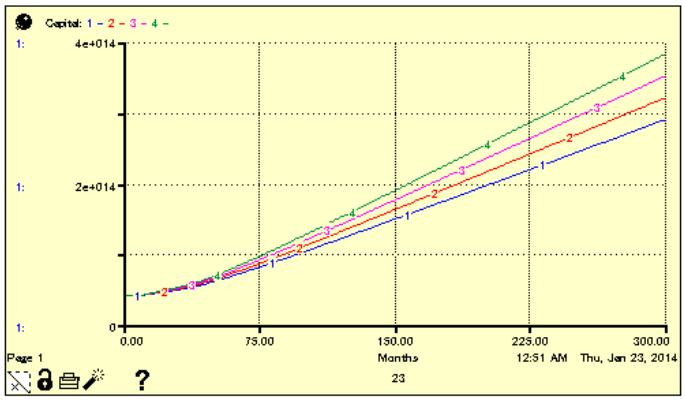
Figure 4.7-Line 1: Total NPL resulted from first condition

Line 2: Number of debtors resulted first condition by adding number of AO

Line 2: Total NPL resulted from first condition by adding number of AO

This scenario also generates that new debtor did not sensitive by the increasing of interest rate. The figures below are the simulation result by comparing the number of debtors in the same condition but different interest rate. The interest rates are 22%, 24.7%, 27.3 % and 30%. The increasing interest rate did not affect the number of NPLs. It is effect the bank capital positively. The series of figures below are the simulation result.





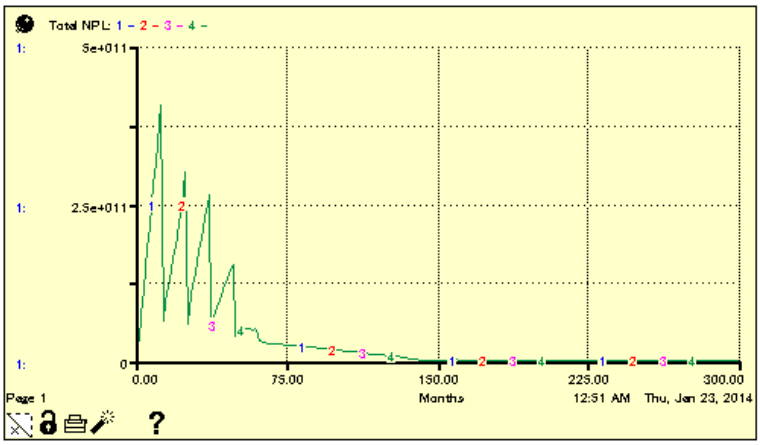


Figure 4.8- Line 1: 22% interest rate Line 3: 27.3% interest rate
Line 2: 24.7% interest rate Line 4: 30% interest rate

7. Conclusion

This study was conducted to provide the solutions for micro credit especially KUR problems. The simulation results from different scenarios are generating several conclusions. The conclusions from this study are as follows:

1. The existing condition of KUR in PT Bank Jabar is modeled in scenario 1. The simulation results from scenario 1 concluded that the KUR in existing condition experiencing a high number of NPL. The increasing number in NPLs makes declining numbers of bank capital. Banks experiencing the loss due to 30% of credit default. The effects of high NPLs is banks determine the complicated credit requirement. This cause the number of KUR keep decline.
2. The policy that should implement in PT Bank Jabar to improve KUR is by doing ease assessment and low credit requirement. The implementation of this policy is simulated in scenario 3. Scenario 3 is set without credit requirement. The simulation generates an increasing number of credit and new debtors. The policy that should implement in PT Bank Jabar to improve KUR is by doing ease credit assessment and low credit requirement. The implementation of this policy is simulated in scenario 3. Scenario 3 was set without credit requirement. The simulation generates an increasing number of credit and new debtors. The increasing of credit make NPLs is increasing as well. The high number of

NPLs makes bank losses due to credit default. It is make bank capital declining although 70% of credit default guaranteed by ASKRINDO.

3. The mixed policies have to be done to get a better condition of KUR. The condition which is banks has profit in distributing KUR and the debtors have ease of access to get KUR. The policy that has to be implemented is to mitigate credit risk. The mitigation is by doing visiting debtors to collect the debt. The mixed policies to be implemented were modeled in scenario 4. The simulations generate that visiting debtor effective to decrease the number of NPLs. The simulation is resulted the increasing number of debtors and total credit. This happens because bank did not applying credit requirement. Other means to improve KUR is by adding more analyst officer. The additional AO will makes the number of debtors and credit will also increase. It is because the process assessments become quicker and visiting debtors more frequently.

4. From scenario 4, the debtors can pay off the debt in 54 month. It is come longer than credit period that should be. This happen due to restructuring the credit. Restructured credit was done because payment capability of debtors less than the installment. This method is one of the means to reduce the NPLs.

5. According simulation result, the debtors are not sensitive to interest rate. Therefore bank can apply the same interest rate as other micro credit produced by PT Bank Jabar. The rise of interest rate can cover the expenses due to mitigation credit risk such as visiting debtors and restructured credit period and it can make the KUR profitable for bank even though KUR is government program.

8. Recommendation

According the conclusion, it can be explained that in order to implement mixed policies to improve KUR require some effort to be carried out both by governments and banks. Therefore the results of this study suggest the following recommendations.

1. In order to attract bank in distribute the KUR, the government should guarantee the loan. The process of claiming the bad loan should be faster, so the bank capital can be distributed to the KUR sooner.

2. The government suggests subsidize the interest rate so the SME entrepreneurs can reach the credit installment set by bank and also KUR can profitable for bank.

3. In order to make the assessment faster, bank should provide more AO or improve the AO performance. By adding more AO, the assessment come faster and the new debtors' inflow can increase faster too. To enhance the AO performance, bank should give more training and course.

4. Bank suggested not determine complicated credit assessment and requirements. This suggested in order easing of access the KUR.

5. PT Bank Jabar should record the incoming application data as it will be useful for SMEs debtors' distribution that applies for KUR. It is useful to targeting SMEs with different strategies for each classification of SMEs.

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Purchasing Decision On Sustainable Muslim Fashion at SME Gallery Maliqa in Terms Of Brand Image, Brand Awareness, Price, Celebrity Endorsements

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Abstract
Concerning clothing and fashion, both the Qur'an and hadith emphasize maintaining modesty, this is reflected in many common elements of Muslim clothing even with diverse interpretations of 'modesty' among Muslims around the world. Muslim clothing fashion trends increasingly look vibrant and easy to use. Not only used during the Eid feast but also used for daily activities Indonesia occupies the 3rd position in global modest fashion consumption of Muslim fashion in Indonesia. Gallery Maliqa which is located at Bandung is a local brand that complements Indonesian Muslim women with various types of clothing that always follow the trend, with its flagship product is the scarf. The purpose of this study is to determine the effect of Brand Image, Brand Awareness, Price, Celebrity Endorsement on purchasing decisions at SME Gallery Maliqa. Quantitative research method with descriptive approach and verification using multiple linear regression. The number of respondents is 100 Muslim women with purposive sampling technique. The results showed that brand image did not affect purchasing decisions, while brand awareness, price, and celebrity endorsements affected purchasing decisions for Muslim Maliqa products.
Keywords: Purchasing Decision, Brand Image, Brand Awareness, Price, Celebrity Endorsements
JEL Classification: M30, M31, M37

Introduction

In the era of modernization as it is today, the need for the world of fashion is now spreading so much. Business people and fashion designers are racing to create the latest and best trend innovations so that the world of fashion is growing and used as a necessity of society in general. The trend of Muslim clothing fashion in Indonesia is growing rapidly. Every day, the trend of Muslim clothing is grounded, touching various layers of fashion lovers in the country. Muslim clothing fashion trends increasingly look vibrant and easy to use. Not only used during the Eid feast but also used for daily activities. Reporting from The State of the Global Islamic Economy Report 2020/2021, Concerning clothing and fashion, both the Qur'an and hadith emphasize maintaining modesty, this is reflected in many common elements of Muslim clothing even with diverse interpretations of 'modesty' among Muslims around the world. Projections for Muslim fashion after Covid increased by 2.7%, Indonesia occupies the 3rd position in global modest fashion consumption of Muslim fashion in Indonesia. (State of the Global Islamic Economy Report, 2020)

Gallery Maliqa which is located at 94 Sriwijaya Bandung is a local brand that complements Indonesian Muslim women with various types of clothing that always follow the trend. Not only fashionable style, it has good quality and comfortable to use by consumers. It has a variety of products such as Mukena, Sajadah, Scarf, Muslim clothing, and accessories.

Sales data that experienced a significant decline indicated that the purchase decision was down. If inferred from several sources such as beautynesia.id and combined with the number of Instagram followers, Maliqa does not enter the top 5 local Muslim fashion brands. Furthermore, brand awareness was conducted pre-surveyed to 60 respondents about several factors that are suspected to influence purchasing decisions such as Do you know/have heard of the Maliqa Gallery brand? When remembering Muslim clothing I remember maliqa, I can immediately get to know Maliqa just by looking, symbols, logos, or other attributes, Maliqa is always on the list of alternatives if I want to buy Muslim fashion products, the result is 14% answer yes, 56% answer no, and 30% answer maybe.

In terms of price, when compared to other similar brands, Maliqa has competitive prices, but when juxtaposed with other brands with lower middle segmentation, it is clear maliqa is much more expensive, consumers measure the affordability of price and purchasing power, when many other alternatives are much more affordable, then it becomes a challenge for Maliqa. Finally, celebrity

endorsements allow consumers to make their purchase decisions. Researchers analyzed when the sales period was high, Maliqa used Celebrity Endorser most often is Bella Tamimi with 160,000 followers, Citra Monica 142,000 followers, Sifa Faujiah 74,000 followers, then in the sales period decreased using Nadra Abdullah 35,600 followers and Carla Iskandar 9,937 followers. This makes researchers wonder if it is influenced by their popularity in social media and becomes an attraction for their followers. The more often promotion through advertising stars is done, the more interested consumers will make purchasing decisions. With these findings, researchers were interested in researching to find out the influence of Brand Image, Brand Awareness, Price, Celebrity Endorsements on the purchase decision at SME Gallery Maliqa.

Literature Review

Purchasing decisions are a process by which consumers recognize the problem, seek information about a particular product or brand, and evaluate how well each of these alternatives can solve the problem, which then leads to a purchasing decision (F. Tjiptono, 2014:21). with the following dimensions:

1. Product selection
   Consumers determine which products to buy, consumers will buy products that have value to them, companies must know what products consumers want.
2. Brand selection
   Consumers who have to determine the brand to be purchased, each brand has its own differences.
3. Selection of distributors
   Consumers must make a decision about which dealer to visit.
4. Purchase Time
   Consumers determine the timing of product purchases based on promotions.
5. Number of purchases
   Consumers can make decisions about how many products they will buy at some point.

Brand Image is a set of memories that are in the consumer's mind about a brand, whether positive or negative (Sangadji & Sopiah, 2013:327), with the following dimensions:

1. Brand Identity
   The first dimension is brand identity. Brand identity is a physical identity related to the brand or product so that consumers easily recognize and distinguish it from other brands or products, such as logos, colors, packaging, location, company identity that swings it, slogans, and others.
2. Brand Personality
   The second dimension is brand personality. Brand personality is the typical character of a brand that forms a certain personality as human, so that the consumer audience easily distinguishes it from other brands in the same category, such as assertive, rigid, authoritative, noble, or cheap smile, warm, compassionate, social spirited, or dynamic, creative, independent, and so on.
3. Brand Association
   The third dimension is the brand association. Brand association is specific things that are appropriate or always associated with a brand, can arise from the unique offering of a product, repetitive and consistent activities such as sponsorship or social responsibility activities, very strong issues related to the brand, or persons.
4. Brand Attitude and Behavior
   The fourth dimension is brand attitude or brand attitude and behavior. Brand attitude and behavior is the attitude or behavior of communication and interaction of brands with consumers in offering benefits and values that they have. Often a brand uses inappropriate and ethical ways of communicating, poor service that influences the public's view of the brand's attitudes and behaviors, or vice versa, sympathetic, honest, consistent attitudes and behaviors between promise and reality, good service and concern for the environment and the wider community form a good perception of the brand's attitudes and behaviors, So brand attitudes &behaviors include the attitudes and behaviors of communication, activities and attributes inherent to a brand when it comes to consumer audiences, including the behavior of employees and brand owners.

5. Brand Benefit & Competence
   The fifth dimension is brand benefit and competence. Brand benefit and competence are typical values and advantages offered by a brand to consumers that make consumers can feel the benefits because their needs, desires, dreams and obsessions are realized by what is offered. The values and benefits here can be functional, emotional, symbolic or social, for example, brands of detergent products with the benefit of cleaning clothes (functional benefits / values), making the wearer of cleaned clothes become confident (emotional benefits / values), become a symbol of the lifestyle of modern society that is clean (symbolic benefits / values) and inspires the environment to care about personal hygiene, environment and conscience (social benefit / values). The benefits, advantages and competencies typical of a brand will affect the brand image of the product, individual or institution / company.

Brand Awareness is brand capabilities that come to consumers' minds when they think about a particular product and how easily that product appears (Aaker, 2014), According to Aaker the level of brand awareness is sequential from the lowest level to the highest level as follows:

1. Recall is how far customers can remember what brands they think. In the recall indicators are like they remember the brand of the product, like the brand of the product, choose the brand of the product and believe in the brand of the product.
2. Recognition is how far customers can recognize a brand in a particular category. In the indicators like they are aware of the brand of the product, can know the brand of the product and can recognize the brand.
3. Purchase is how far the customer puts an alternative brand into his choice in buying a product. In the indicator they buy the brand of the product and use the brand of the product.
4. Consumption is how far customers remember the brand if they are using a competitor's brand. In the indicator they reported the brand of the product.

Kotler and Armstrong (2016:151) define price as the amount of money demanded for a product or service. Price is the easiest element in a customized marketing program, product features, channels, and even communication takes a lot of time. There are 4 that characterize the price size, namely, as follows:

1. Affordability of prices
   Consumers can reach the price set by the company. There are usually several types of products that are the same brand but the price is different.
2. Price conformity with product quality
   Price is often used as a determinant of quality; some consumers assume if the price of a good / service is high then the quality is better.
3. Price conformity with benefits
   Some consumers, before deciding to buy a product, they see what benefits will be able if they buy the product.
4. Prices according to ability or price competitiveness
   Some consumers often compare the price of one product with another. Consumers will consider the price of an item before buying it.

Celebrity Endorsements is utilizing an artist, entertainer, athlete and public figure that is widely known by many for success in their respective fields from supported fields (Shimp, 2010:450). The attributes of celebrity endorsements include:

1. Celebrity credibility
   Celebrity credibility is trust and the superiority of celebrities in delivering a product with the power of its attractiveness is the main reason to choose celebrities as supporters of advertising. People who can convince others are people who can be trusted and have good knowledge and communication in brand recognition.
2. Celebrity attractiveness
   The selection of celebrities in the process of delivering messages or information by advertising executives is evaluated by their attractiveness. Attraction includes hospitality, fun, physicality, and work as some of the important dimensions of the concept of attractiveness. But attractiveness alone is not as important as credibility and compatibility with certain services.
3. Celebrity suitability

Advertising executives demand that the celebrity's image, values and behavior match the desired impression for the advertised brand. Fit is a model that shows that celebrities must be attractive because they are more effective in supporting the product to increase consumer appeal to the item.

Previous research from Wang & Hariandja (2016), this research intends to look at the impact of brand ambassadors on brand image and customer purchasing decision of Tous Les Jours in Indonesia. 3 hypotheses are said at the start of research and to prove the hypotheses, 109 questionnaires are dispensed to behavior these studies. The questionnaires are tested through smart-PLS three and the use of path analysis. The result of this has a look will display the influence of brand ambassador on brand image and customer purchasing behavior of Tous Les in Indonesia and show the effectiveness of Kim Soo Hyun as a brand ambassador.

Research from Bagus & Udayana (2015), The motive of this paper is to understand the impact of product innovation, endorsements, and brand image related to brand awareness and popularity for affirmative purchasing decisions on Solo Medicinal merchandise Fountain. Facts had been amassed the use of random sampling. Pattern length is 200, and 165 questionnaires were lower back. The results showed that product innovation and popularity and a significant-high-quality impact on brand image, recognition and endorsement and tremendous high-quality effect on brand awareness, brand image and brand awareness positively effect to purchase intentions, purchase intentions positive and significant impact on the stability of the purchasing decision. Findings: The updates of this research are the research version in terms of purchase intention is then forwarded to the stability variable purchase decision. Normally throughout this observe best prevent on purchase intentions on balance or prevent shopping for the decision but did not begin with the purpose of buying. Even though balance begins with the decision to shop for should purchase intention.

Maria et al. (2011) analyzes the commercial and socio-demographic antecedents of the importance of price in buyers' decisions. The study uses ordinal regression to analyze the data obtained from a random sample of consumers of frequently purchased products; these consumers were surveyed in different stores. The variables with the highest influence on price importance in purchase decisions are shown in this research.

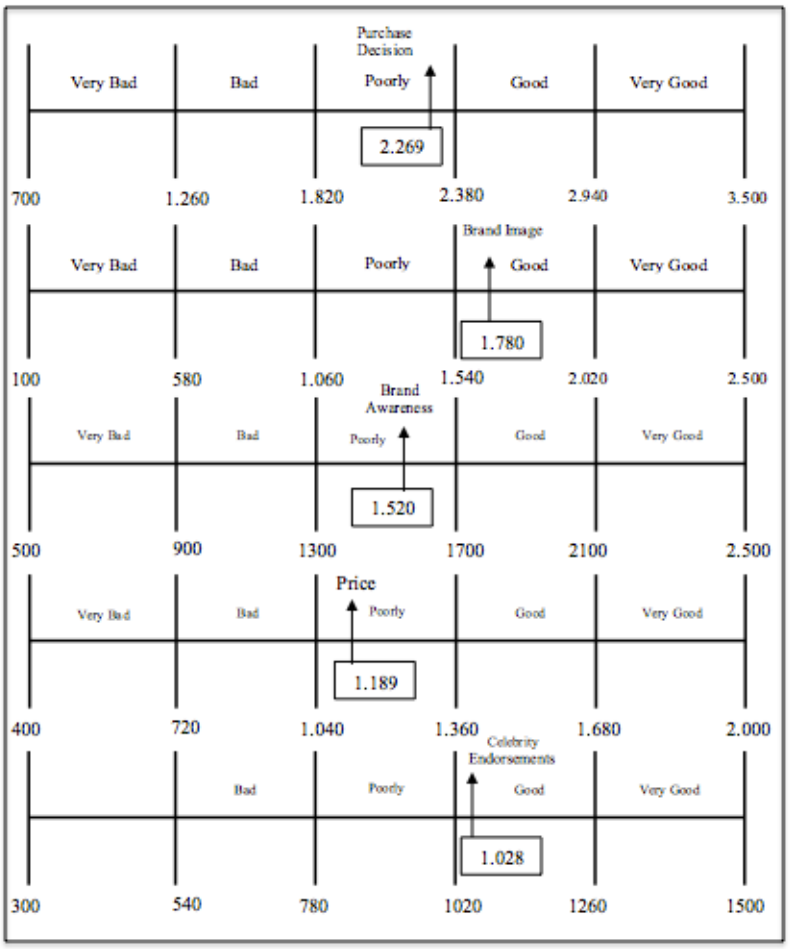
Ifeanyichukwu (2016) expresses that celebrity endorsement is one of the very many features of modern marketing. This study attempts to determine the effect of celebrity endorsement on consumer purchase of a product. 200 young adults were conveniently selected as respondents for the study. Regression was used to test for the significance of the hypotheses generated. A positive and significant relationship between expertise, attractiveness, and respect accorded to the celebrity vis-a-vis purchase decision of consumers show that consumers make the celebrities their role models.

Methods

The method in this study is quantitative with a descriptive and verification approach. Sampling technique using purposive sampling, the population in this study is the number of Maliqa Instagram followers as many as 64.500 followers, and sampled using the formula Slovin as follows: N = 64.500/64.500 (0,1)2 + 1= 99,85 ~ 100 respondents. In this study has been conducted tests of validity and reliability, the test results for the entire questionnaire show valid, and the overall variables show reliability. Furthermore, descriptive testing uses frequency distribution while verification uses multiple linear regressions. But before regression, the researcher first tested the classical assumption, and the results of the normality, multicollinearity, and heteroskedasticity tests passed.

Results

Descriptive testing of the study was presented directly in one image that showed the overall variable results of the responses of 100 respondents.



Source: Primary data processed, (2021)

Figure 1. Continuum Line of Respondent's Response

Descriptive results show, the variables of purchasing decisions, brand awareness, and prices are in the category of poorly, while variable brand image and celebrity endorsements are in the category of good, but for celebrity endorsements although good category, the points obtained are almost close to the category less good.

Table 1. Summary of Analysis Results

Variables	Beta	r	R^2	Contribution
Brand Image	0.150	0.309	0.988	4.69%
Brand Awareness	0.410	0.905		37.56%
Price	0.457	0.911		42.14%
Celebrity Endorsement	0.257	0.600		15.61%
	α 7.784	**R** 0.926	98.8%	100.00%

Source: Primary data processed, (2021)

From the summary, it will be discussed one by one as follows:

1. The constant value is marked positive 7.784 which indicates if the Variables Brand Image, Brand Awareness, Price, and Celebrity endorsements have no change or are equal to 0 then the Purchase Decision is 7.784. While Brand Image has a positive regression of 0.150, this means that if the Brand Image is increased every 1 time, it will increase the Purchase Decision by 0.150. While the Brand Awareness variable will increase the Purchase Decision by 0.410, the price variable will increase the Purchase Decision by 0.457, the last is the Celebrity endorsements variable will increase the Purchase Decision by 0.257.

2. Correlation between Brand Image and Purchase Decision of 0.309 which is at the coefficient interval of 0.200 - 0.399 which means that the relationship between the two variables is low, Correlation between Brand Awareness and Purchasing Decision has a value of 0.905 in intervals of 0.800 - 1,000 which means there is a very strong positive correlation, Correlation between Price and Purchasing Decision have a value of 0.911 which means there is a positive correlation that means there is a very strong correlation, The correlation between Celebrity endorsements and Purchase Decision of 0.600 is at the coefficient interval of 0.600 - 0.799 which is a strong relationship.
3. Simultaneous correlation between Brand Image, Brand Awareness, Price and Celebrity endorsements variables with Purchasing Decisions having a value of 0.926 being in intervals of 0.800 – 1,000 can be concluded together to have a very strong influence on Purchasing Decisions.
4. Contribution of influence between brand image variables to purchasing decisions by 4.69%, brand awareness influence on purchasing decisions by 37.56%, Price to purchasing decisions by 42.14%, Celebrity Endorsement to purchasing decisions by 15.61%, while the coefficient of determination from Brand Image, Brand Awareness, Price and Celebrity endorsements to Purchase Decisions by 98.8%.

Next is the results of partial and simultaneous hypothesis tests:

Table 2. Partial Hypothesis

Model		t	Sig.
1	(Constant)	3.233	.002
	Brand Image	1.793	.076
	Brand Awareness	5,068	,000
	Price	5,144	,000
	Celebrity Endorsement	6.684	.000

a. Dependent Variable: Purchasing Decision

Source: Primary data processed, (2021)

SPSS results for partial hypothesis tests, if the sign value < 0.05 then H0 is rejected, and H1 is accepted, meaning that there is an influence between independent variables and dependents. for brand image because the sign value of 0.076 > 0.05, then H0 is accepted, meaning there is no influence between brand image on purchasing decisions, while for brand awareness, price, and celebrity endorsement variables have an influence on the purchase decision because the sign value is 0,000.

Table 3. Simultaneous Hypothesis

Anova

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	93,686	2	46,843	291,967	,000[b]
	Residual	15,563	97	,160		
	Total	109,249	99			

Source: Primary data processed, (2021)

The results of the hypothesis test simultaneously show a significant value of 0.000 < 0.05, so it can be concluded that variable brand image, brand awareness, price, and celebrity endorsements affect the purchase decision

Reporting Research Results

The results of calculations using SPSS 26, it was obtained that partially, brand image variables did not affect purchasing decisions, judging by the results of the correlation coefficient even though they had a low relationship of 0.309, but still contributed 4.69%. Conversely, in the brand awareness and price variables that have a very strong correlation with correlation values 0.905 and 0.911, hypothetically both variables affect purchase decisions partially and contribute 37.56% to brand awareness variables and 42.14% to price variables to purchasing decisions. The last is the celebrity endorsements variable which also affects purchasing decisions with a strong correlation relationship of 0.600 and contributes 15.61% influence to purchasing decisions.

Discussion

Descriptively, the brand image and celebrity endorsements in The Maliqa Gallery have been considered good with a score of 1.780 and 1.028, it is not in accordance with the researchers' expectations in the introduction. The highest score from one of the brand image statements is obtained from the statement "Consumers easily recognize and distinguish it from other brands or products" with good categories, which means that Maliqa products have characteristics that can be recognized by consumers. The highest score of all items on the celebrity endorsements variable statement is obtained from the statement "The ability to increase consumer attractiveness towards an item", meaning that celebrities endorsed by the Maliqa gallery are considered to have good attractiveness to influence consumers in buying Maliqa products.

Conversely, the brand awareness variable is descriptively rated poorly with 1,520 points, with the lowest score on the item "When remembering Muslim clothing I remember Maliqa", meaning consumers do not always remember the maliqa brand, and another possibility is that consumers have alternative brands for Muslim fashion products. The variable price descriptively has a score of 1,189 with the poorly category, the lowest score in the statement "Maliqa Brand Muslim fashion prices offered in accordance with quality", meaning that the price offered by Maliqa is not in accordance with the quality given, it could be that the quality of other competitors' products is felt by consumers better and in accordance with the price offered.

The findings from partial hypothesis testing on the brand image variable on purchasing decisions do not have an effect, this is not in accordance with previous research from Wang and Hariandja (2016) which said that the brand image variable had an effective effect on purchasing decisions of Tous Les in Indonesia. The results of hypothesis analysis of variable brand awareness, price, and celebrity endorsements affect purchasing decisions, according to research conducted by Bagus & Udayana (2015), Maria et al. (2011), and Ifeanyichukwu (2016). The relationship between brand awareness and price variables has a very strong correlation to purchasing decisions, while celebrity endorsements are strongly correlated. Simultaneously brand image, brand awareness, price, and celebrity endorsements have a very strong correlation with the value of 0.926, close to 1. This means that when the 4 independent variables undergo changes, it will change the variable of the purchase decision.

Conclusion

Calculations obtained from 100 respondents for descriptive testing, obtained that the purchase decision variable is in the poorly category, the brand image variable is in the good category, the brand awareness variable is in the poorly category, the price is in the poorly category, while celebrity endorsements have the good category but are close to the poorly score. Furthermore, from the hypothesis test, brand image variables have no effect on purchasing decisions on Maliqa Muslim fashion products, while for brand awareness, price, and celebrity endorsements variables affect the decision to buy Muslim clothing SME gallery maliqa. Therefore, it is advisable for further researchers to examine in addition to brand image variables, and expand other variables as well such as value creation, online promotion, and product quality. It is also advisable to expand the sample and use other analytical tools.

Limitation

The limitation faced by the researcher is the level of objectivity of the respondents in answering the questionnaire given, whether they really read the statement items carefully or just fill in without attention. because the questionnaire was distributed online, the researcher could not confirm the

respondent's situation in answering the questionnaire. In the future, it is expected to reach respondents who have never bought Maliqa products, because, in this study, respondents were limited to those who had already bought, because this study wanted to measure consumers who had bought, then try to measure buying interest in Maliqa products. Another limitation is that this study has not reached business consumers or B to B, while Maliqa has 2 categories of consumers, business consumers in this case are agents who are in several areas outside the city of Bandung.

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Analysis of the Performance of Non-Bank Financial Institutions for the 2018-2020 Period (Case Study at PT. Pegadaian)

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Abstract
This study aims to examine the performance of non-bank financial institutions for the 2018-2019 period, a case study at PT. Pegadaian (Persero). The method used is a quantitative method with a descriptive verification approach and uses quantitative data types. The data source used is time series data from 2018-2020 for 33 months. The population used is the monthly financial statements from 2018-2020 using purposive sampling technique. The data analysis technique used is multiple linear regression analysis. The results showed that cash turnover and working capital turnover had a significant negative effect on Firm Performance, accounts receivable turnover had a significant positive effect on Firm Performance, while inventory turnover had no significant effect on Firm Performance. Based on the study of PT. Pegadaian (Persero) must pay attention to three main factors, namely Cash Turnover, Working Capital Turnover and Accounts Receivable Turnover to maintain Firm Profitability.

Keywords: Performance, Profitability, Cash Turnover, Accounts Receivable Turnover, Inventory Turnover and Working Capital Turnover
JEL Classification: G20, G23, G30
The authors should add 1-3 JEL Classification Number. Information guide for the Journal of Economic Literature (JEL) can be found athttps://www.aeaweb.org/jel/guide/jel.php

Introduction

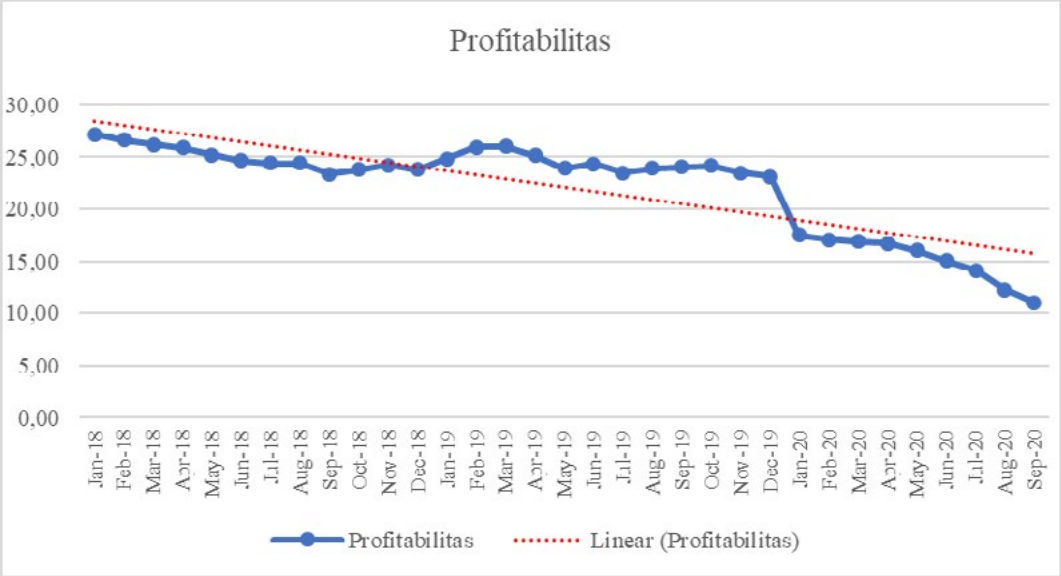
The Covid-19 pandemic that occurred in early 2020 had a negative impact on the global economy. Research by (Baldwin & Tomiura, 2020) suggests that according to the World Bank, the economic impact of Covid-19 will stop the businesses of nearly 24 million people in East Asia and the Pacific. And in the worst case scenario, the World Bank also estimates that nearly 35 million people will remain in poverty, (Yamali & Putri, 2020). Covid-19 also has a negative impact in Indonesia, according to Bank Indonesia, there has been a decline in the projection of economic growth from the original 5.0% - 5.4% to 4.2% - 4.6%. Other negative impacts were massive layoffs of 10% of 15 million workers, a decrease in PMI Manufacturing Indonesia by 45.3%, a decline in imports of 3.7% in the first quarter, flight delays which resulted in losses reaching Rp. 207 billion and a decrease in occupancy of 6,000 hotels, resulting in a loss of tourism foreign exchange, (Sumarni, 2020).

To deal with the Covid-19 pandemic, the Government of Indonesia has implemented several policies, namely: restrictions with social distancing policies (Hadiwardoyo, 2020), closure of several access roads within a certain time as well as restrictions on the number of transportation and transportation operating hours with the aim of restraining the rate of community activity outside the house. The stipulation of these policies has an impact on declining economic growth, decreasing sales volume and turnover, decreasing the number of MSME buyers, rising prices of basic commodities, closing several markets, MSMEs being threatened with bankruptcy and even going out of business., the occurrence of a decrease in people's income which causes a decrease in purchasing power, so that people are unable to buy materials for their daily needs, (Nasruddin & Haq, 2020), (Fathoni, 2020),(Yunus & Rezki, 2020).

The establishment of a COVID-19 prevention policy has encouraged some people to pawn their belongings to a trusted pawnshop, namely PT Pegadaian (Persero). PT Pegadaian (Persero) is one of the State-Owned Enterprises (BUMN) which is engaged in financial services with its core business of distributing loans to the public based on a pawn system and micro credit. The purpose and intent of PT Pegadaian (Persero) itself is to improve the welfare of the community, especially the lower middle

class through the provision of funds based on the law of pawning and other financial services based on the provisions of applicable laws and regulations. Therefore, PT Pegadaian (Persero) is often considered as a supporter of government policies and programs in the field of economy and national development (Rosmita et al., 2020), (Sumarni, 2020).

In addition to the welfare of the community, PT Pegadaian (Persero) also aims to seek profit in order to maintain the viability of the company in the long term so that it has good prospects in the future. The survival of a company, both a state-owned company and a private company, is influenced by the stability of its financial performance (Fahmi, 2020). Financial performance can be seen from the company's profitability, (Kasmir, 2018), profitability describes the company's financial performance indicators within a certain period of time, (Margaretha, 2014). Research on the issue of financial performance is still an important phenomenon to be carried out, so this research will be conducted by reviewing the financial performance of non-bank financial institutions, the following is a description of the financial performance of PT. Pegadaian (Persero).



Source: PT Pegadaian (Persero) (data processed, 2020)

Figure 1 Profitability Development of PT Pegadaian (Persero) 2018-2020

The profitability development of PT Pegadaian (Persero) from 2018 to 2020 based on Figure 1 has fluctuated every month with a downward trend.Profitability with the highest value of 27.16% occurred in January 2018, and profitability with the lowest value of 11.07% occurred in September 2020. This shows that the ability of PT Pegadaian (Persero) in earning profits through sales is getting lower. The ability of PT Pegadaian (Persero) in reducing its costs is considered not good. So that the performance of PT Pegadaian (Persero) can be said to be not good.

From Figure 1 it can also be seen that the profitability of each month in 2020 was also not greater than the months in the previous year. This means that the percentage of net profit obtained from each sale in 2020 is smaller than the months of the previous year. In other words, the ability of PT Pegadaian (Persero) to earn a profit through sales is quite low. Profitability in 2020 is also below the general industry average standard, which is below 20% (Kasmir, 2018). This shows that the Covid-19 pandemic that occurred in 2020 had a negative impact on the economy of PT Pegadaian (Persero).

Recent study on firm profitability is influenced by various factors, the results of a study by (Noratika, 2014) found that cash turnover partially affects profitability, meanwhile, (Wulandari et al., 2017) and (Febriani, 2017) suggest that cash turnover has no effect on profitability. The results of other studies by (Nurlia et al., 2018) and (Wulandari et al., 2017) where both of these studies state that receivables turnover has a positive and insignificant effect on profitability. In contrast to (Noratika, 2014) which concludes that accounts receivable turnover has no effect on profitability. The firm profitability is also influenced by inventory turnover, (Wulandari et al., 2017) state that inventory turnover has an effect on profitability. In contrast to (Permana & Hidayat, 2020) who refuse to conclude that inventory turnover has no effect on profitability. Working capital is an indicator that affects firms profitability, according to (Artati, 2019) and (Wulandari et al., 2017) who conclude that

working capital turnover has a significant effect on profitability. But this study was also refuted by (Adawia et al., 2019) whose concluded that working capital turnover did not have a positive and significant effect on profitability.

There are several differences in the results of research regarding firm profitability, this study will re-examine in more detail and completeness in order to obtain valid results related to liquidity ratios, namely cash turnover and activity ratios, namely receivables turnover, inventory turnover and working capital turnover which affect the firm profitability. Based on the phenomenon and description of the background above, the purpose of this study is to analyze the Performance of Non-Bank Financial Institutions for the 2018-2020 Period (Case Study at PT.Pegadaian).

Literature Review

Financial performance can also be interpreted as an analysis carried out to see the extent to which a company has implemented by using financial implementation rules properly and correctly. Financial performance is revenue recognition and cost attribution that results in a profit that is superior to cash flow to evaluate financial performance, (Subramanyam, 2017). Revenue recognition here ensures that all revenue generated in a period has been recognized.

According to (Hery, 2017), profitability is "the ratio used to measure the company's ability to generate profits from normal business activities. Another opinion (Hanafi & Halim, 2018) states that the profitability ratio is a ratio that measures the company's ability to generate profits (profitability) at a certain level of sales, assets and share capital. (Margaretha, 2014) explains that the profitability ratio can be measured using *net profit margin*, (Fahmi, 2020) argues that net profit margin is "the ratio used to show the company's ability to generate profits." (Kasmir, 2018) adds that the net profit margin is obtained by "comparing operating profit with sales, the higher this ratio, the better the company's profitability."

According to (Kasmir, 2018) states that "the general standard of the industry's net profit margin value is 20%." According to (Fahmi, 2020) net profit margin is the result of a comparison between net profit after tax and sales. So the size of the value of the net profit margin is influenced by net profit after tax and the level of sales.

Cash Turnover and Profitability

Cash turnover according to (Kasmir, 2018) is a comparison between sales and the average amount of cash, cash turnover shows the ability of cash to generate income so that it can be seen how many times the cash rotates in a certain period. The greater the amount of cash in the company, the higher the level of liquidity. This means that the company has a smaller risk of not being able to meet its financial obligations. On the other hand, if the company only pursues profitability, it will try to make all of its cash stock available or in working condition. (Riyanto, 2013) states that the amount of cash in a "well finance" company should not be less than 5% to 10% of the total current assets. The amount of cash can also be related to the amount of sales or sales.

The comparison between sales and the average amount of cash illustrates the level of cash turnover. The higher the turnover the better, because this means the higher the efficiency of the use of cash. But an excessively high cash turnover can mean that the amount of cash available is too small for the sales volume in question, the greater the cash turnover, the less cash is needed in the company's operations. Thus, cash turnover must be maximized in order to provide benefits for the company.

Acording to (Noratika, 2014), that cash turnover partially affects profitability. The influence means that the higher the cash turnover rate, the higher the profits obtained by the company with a certain amount of cash owned by the company, so that it will generate high sales. In the end, a high level of sales will cause the company's profits to be higher as well. (Wulandari et al., 2017), (Febriani, 2017) who argue that cash turnover has no effect on profitability. This means that regardless of the value of cash turnover, both positive and negative, it will not affect changes in the profitability value.

Accounts Receivable Turnover and Profitability

The receivables turnover ratio is used to measure how long it takes to collect receivables for a period or how many times the funds embedded in receivables rotate in one period, (Agustina, 2016). This ratio shows whether a company can collect receivables or sales made on credit effectively or not.

(Munawir, 2015) also argues that the higher the level of receivables means the faster the funds invested in accounts receivable can be billed into cash or indicate that the working capital embedded in accounts receivable is low.

(Riyanto, 2013) argues that the greater the volume of credit sales each year means the company must provide even greater investment in receivables. The large amount of receivables also raises the level of risk that will be faced, but at the same time it also increases profitability.

The results of research by (Nurlia et al., 2018), (Wulandari et al., 2017) state that there is an influence between receivables turnover and profitability, while (Noratika, 2014) concludes that receivables turnover has no effect on profitability, this shows that receivables turnover has an important role on profitability. company.

Inventory Turnover and Profitability

Inventory turnover is the ratio used to measure the number of times the funds invested in this inventory rotate in one period, if the ratio obtained is high, it indicates the company is working efficiently and the liquid inventory is getting better, as well as if the inventory turnover is low, it means the company is working inefficiently. unproductive and a lot of inventory that accumulates, this will result in investments in low returns, (Kasmir, 2018).

The existence of inventory in the company can benefit the company as stated by Sutrisno (2016: 84), namely high inventory allows the company to meet sudden customer demands, but high inventory will cause the company to provide funds for large working capital as well. Acording to (Horne & Wachowicz, 2014) the higher the inventory turnover, the more efficient the company's inventory management and the fresher and more liquid the inventory. The study of (Noratika, 2014) found that inventory turnover had an effect on profitability. Meanwhile, (Permana & Hidayat, 2020) and (Wulandari et al., 2017) concluded that inventory turnover had no effect on profitability.

Working Capital Turnover and Profitability

The bigger the company, the higher the need for funds to support working capital and that is followed by the higher turnover of working capital that can be provided to cover the costs of working capital issued, (Fahmi, 2020). That is, when sales turnover is higher and exceeds the working capital cost limit, the company will make a profit.

With the fulfillment of working capital turnover, the company can maximize its profit. For companies that lack working capital, it can endanger the survival of the company concerned, because it will be difficult or even unable to meet the desired profit target (Kasmir, 2018).

Working capital turnover shows the relationship between working capital and sales that can be obtained by the company for each rupiah of working capital. This ratio will affect profitability. The low level of profitability when associated with working capital can indicate the possibility of low sales volume compared to the costs used. So it is hoped that there will be good working capital management within the company. In other words, a company that has a high level of profitability means that it is also efficient in using its working capital (Munawir, 2015).

The results of research by (Artati, 2019), (Rahayu & Susilowibowo, 2014) and (Wulandari et al., 2017) find that working capital turnover has a significant effect on profitability. This means that working capital turnover contributes to changes in profitability, but other studies by (Adawia et al., 2019) and (Sinaga, 2019) find that there is no effect between working capital turnover and profitability.

Methods

The research method used in this study is a quantitative method with a descriptive and verification approach, (Sekaran & Bougie, 2016). The data source used in this study is secondary data (secondary data) in the form of time series data, published by PT Pegadaian (Persero) and the Financial Services Authority (OJK). The population used in this study is monthly financial reports from 2018-2020. The sampling technique used is purposive sampling with the following criteria: Complete financial statements from January 2018 to September 2020 and audited financial statements. The sample in this study was 33 months, namely from January 2018 to September 2020.The analytical method used is linear regression with the following equation:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Information:

Y = Firm Performance
α = constant
β = regression coefficient
X1 = cash turnover
X2 = accounts receivable turnover
X3 = inventory turnover
X4 = working capital turnover
e = *error* (error)

Table 1 Operationalization of Variables

No.	Variable	Variable Concept	Indicator	Size	Scale
1	Firm Performance (Y)	*Net profit margin*is the ratio used to show the company's ability to generate profits. (Fahmi, 2020)	$net\ profit\ margin = \frac{earning\ after\ tax}{penjualan} \times 100\%$ (Fahmi, 2020)	%	Ratio
2	Cash Turnover (X1)	Cash turnover is a ratio used to measure the level of cash available to pay bills (debts) and costs related to sales. (Kasmir, 2018)	$perputaran\ kas = \frac{penjualan}{rata - rata\ kas}$ (Subramanyam, 2017)	Time	Ratio
3	Accounts Receivable Turnover (X2)	Accounts receivable turnover is a ratio used to measure how long the receivable collection period is during an accounting period. (Hery, 2017	$perputaran\ piutang = \frac{penjualan\ bersih}{rata - rata\ piutang}$ (Hery, 2017)	Time	Ratio
4	Inventory Turnover (X3)	Inventory turnover is a ratio used to measure the number of times the funds invested in this inventory rotate in one period. (Kasmir, 2018)	$perputaran\ persediaan = \frac{penjualan}{rata - rata\ persediaan}$ (Kasmir, 2018)	Time	Ratio
5	Working Capital Turnover (X4)	Working capital turnover is one of the ratios to measure or assess the effectiveness of the company's working capital during a certain period. (Kasmir, 2018)	$perputaran\ modal\ kerja = \frac{sales}{current\ asset - current}$ Rufaidah (2014:34)	Time	Ratio

Source: processed by researchers 2021

Results And Discussion

Table 2 shows descriptive statistics of the dependent and independent variables of this study, the results of descriptive statistical analysis show that the profitability of PT Pegadaian (Persero) in 2018-2020 reached an average value (mean) of 22.0855% and a standard deviation of 4 ,53895. This shows that the data is well distributed because the deviation rate is smaller than the mean value. Profitability with the highest (maximum) value of 27.16% in January 2018, and profitability with the lowest (minimum) value of 11.07% in September 2020

Table 2. Descriptive Statistics

	N	Minimum	Maximum	mean	Std. Deviation
Firm Performance (Y)	33	11.03	27.16	22.0855	4.53895
Cash Turnover (X1)	33	1.93	29.62	12.2885	7.04019
Accounts Receivable Turnover (X2)	33	0.02	0.29	0.1545	0.08182
Inventory Turnover (X3)	33	3.51	95.9	32.897	21.4849
Working Capital Turnover (X4)	33	0.05	0.64	0.3452	0.18547

Source: Statistical data processing results, 2021

Cash turnover at PT Pegadaian (Persero) in 2018-2020 reached an average value (mean) of 12.2885 times and a standard deviation of 7.04019. This shows that the data is well distributed because the deviation rate is smaller than the mean value. The cash turnover with the highest (maximum) value was 29.62 times in September 2020, and the lowest (minimum) cash turnover was 1.93 times in January 2018.

Accounts receivable turnover at PT Pegadaian (Persero) in 2018-2020 reached an average value (mean) of 0.1545 times and a standard deviation of 0.08182. This shows that the data is well distributed because the deviation rate is smaller than the mean value. The receivables turnover with the highest (maximum) value was 0.29 times in September 2020, and the lowest (minimum) receivables turnover was 0.02 times in January 2018.

Inventory turnover at PT Pegadaian (Persero) in 2018-2020 reached an average value (mean) of 32.8970 times and a standard deviation of 21.48490. This shows that the data is well distributed because the deviation rate is smaller than the mean value. The inventory turnover with the highest (maximum) value was 95.90 times in December 2018, and the lowest (minimum) inventory turnover was 3.51 times in January 2018.

Working capital turnover at PT Pegadaian (Persero) in 2018-2020 reached an average value (mean) of 0.3452 times and a standard deviation of 0.18547. This shows that the data is well distributed because the deviation rate is smaller than the mean value. Working capital turnover with the highest (maximum) value of 0.64 times in December 2019, and working capital turnover with the lowest (minimum) value of 0.05 times in January 2019.

Table 3. Results of Multiple Linear Regressions

Model	Unstandardized Coefficients		Standardized Coefficients	t - test		F-Test	
	B	Std. Error	Beta	t-value	Sig.	F-value	Sig.
(Constant)	24,205	1.157		20,926	.000	10,791	.000b
Cash Turnover (X1)	-.877	.301	-1.361	-2,918	.007		
Accounts Receivable Turnover (X2)	185,349	51,985	3.341	3.565	.001		
Inventory Turnover (X3)	.074	.048	.352	1,549	.133		
Working Capital Turnover (X4)	-64,985	20,488	-2.655	-3.172	.004		

Model	Unstandardized Coefficients		Standardized Coefficients	t - test		F-Test	
	B	Std. Error	Beta	t-value	Sig.	F-value	Sig.
R = 0.779 R^2 = 0.607 Adjusted R^2 = 0.550 Significant = 0.000							

Source: Statistical data processing results, 2021

Based on Table 3, it can be seen that the constant values and regression coefficients obtained show the effect of cash turnover, receivables turnover, inventory turnover and working capital turnover on profitability, so that multiple linear regression equations can be formed as follows:

$$Y = 24.205 – 0.877 (X1) + 185.349 (X2) + 0.074 (X3) - 64.7985 (X4) + e$$

F-test results show that simultaneously all variables affect the company's performance. The results of Adjusted R Square of 0.550 indicate that cash turnover, accounts receivable turnover, inventory turnover and working capital turnover simultaneously contribute 55% to the company's performance, the remaining 45% is influenced by other factors not examined.

Effect of Cash Turnover on Firm Performance

Based on the results of the study, it was found that there was a partial effect of cash turnover on profitability. This can be seen in the results of partial hypothesis testing or t-test, where in the study the t-value of cash turnover on profitability is -2.918 with a coefficient value of -0.877 and indicates a negative coefficient direction. While the value of Sig. cash turnover of 0.007 <0.05 which means cash turnover has a significant negative effect on profitability. So it can be decided to reject H0 and accept H1.

This result is not in accordance with the initial hypothesis which presumes that cash turnover will have a positive effect on profitability. This means that during the research period from 2018 to 2020, cash turnover and profitability do not move in the same direction. So if there is an increase in cash turnover, there will be a decrease in profitability. The results showed that the cash turnover at PT Pegadaian (Persero) was excessively high, which meant that the amount of cash and cash equivalents available at the company was too small for the sales volume in question. With the availability of cash that is too small, the company will find it difficult to pay bills or debts and other costs related to sales, resulting in low profitability. This shows that cash management at PT Pegadaian (Persero) is less effective. The results of this study are in line with (Noratika, 2014) research which states that cash turnover partially affects profitability. In contrast to the research of (Wulandari et al., 2017) and (Febriani, 2017) who argue that cash turnover has no effect on profitability.

The Effect of Accounts Receivable Turnover on Firm Performance

Based on the results of the study, it was found that there was a partial influence of receivables turnover on profitability. This can be seen in the results of partial hypothesis testing or t-test, where in the study the t-value of receivables turnover on profitability was 3.565 with a coefficient value of 185.349 and showed a positive direction of the coefficient. While the value of Sig. receivables turnover of 0.001 <0.05, which means that receivables turnover has a significant positive effect on profitability. So it can be decided to reject H0 and accept H1.

This result is in accordance with the initial hypothesis which presumed that receivables turnover would have a positive effect on profitability. This means that during the research period from 2018 to 2020, receivables turnover and profitability move in the same direction. So that if there is an increase in receivables turnover, there will also be an increase in profitability. This is because the high turnover of accounts receivable will increase the level of risk that will be faced by the company. The most obvious risk is the risk that the receivables will be paid slowly or exceed their maturity which causes the company's cash flow to be hampered and/or worse, the receivables are not paid at all or can be said to be bad debts that cause losses to the company. But at the same time,

The results of this study are in line with the research of (Nurlia et al., 2018) and (Wulandari et al., 2017) who suggest that there is an influence between receivables turnover and profitability. In contrast to (Noratika, 2014) which concludes that receivables turnover has no effect on profitability.

Influence of Inventory Turnover on Firm Performance

Based on the results of the study, it was found that there was no partial effect of inventory turnover on profitability. This can be seen in the results of partial hypothesis testing or t-test, where in the study the t-value of inventory turnover on profitability is 1.549 with a coefficient value of 0.74 and indicates a positive direction of the coefficient. While the value of Sig. Inventory turnover is 0.133 > 0.05, which means that inventory turnover has no significant positive effect on profitability. So it can be decided to accept H0 and reject H1.

This result is not in accordance with the initial hypothesis which presumes that inventory turnover will have a positive effect on profitability. This means that during the research period from 2018 to 2020, inventory turnover does not have any implications for the movement of the company's profitability. This is because the inventory turnover at PT Pegadaian (Persero) is very small and is considered a supporting facility in the process of providing services and does not interfere with the company's operational activities. Inventories in the operational activities of PT Pegadaian (Persero) are goods used in the process of providing services and goods available for sale. The inventories consist of gold inventories and goods inventories. Inventories of gold are related to the company's operational activities in the business of buying and selling gold of precious metals, while inventories of goods are related to goods used to support business activities in providing services such as forms of Proof of Credit (SBK), gold test needles, printed goods, office stationery , office supplies, computer equipment, stamps and stamps. Thus, due to the small inventory turnover, it does not contribute to the company's profitability.

The results of this study are in line with the research of (Permana & Hidayat, 2020) and (Wulandari et al., 2017) concluding that inventory turnover has no effect on profitability. Meanwhile, (Noratika, 2014) argues that inventory turnover has an effect on profitability.

The Effect of Working Capital Turnover on Firm Performance

Based on the results of the study, it was found that there was a partial effect of working capital turnover on Firm Performance. This can be seen in the results of partial hypothesis testing or t-test, where in the study the t-value of working capital turnover on Firm Performance is -3.172 with a coefficient value of -64,985 and indicates a negative coefficient direction. While the value of Sig. working capital turnover is 0.004 <0.05, which means that working capital turnover has a significant negative effect on Firm Performance. So it can be decided to reject H0 and accept H1.

This result is not in accordance with the initial hypothesis which presumes that working capital turnover will have a positive effect on Firm Performance. This means that during the research period from 2018 to 2020, working capital turnover and Firm Performance do not move in the same direction. So if there is an increase in working capital turnover, there will be a decrease in Firm Performance. This is due to the possibility of inefficiency in the use of the company's working capital caused by the following factors: The nature or type of the company and the level of inventory turnover. The results of this study are in line with the research of (Artati, 2019) and (Wulandari et al., 2017) which conclude that working capital turnover has a significant effect on Firm Performance.

The Influence of Cash Turnover, Accounts Receivable Turnover, Inventory Turnover and Working Capital Turnover on Firm Performance

Based on the results of the study, it was concluded that there was an effect of cash turnover, accounts receivable turnover, inventory turnover and working capital turnover simultaneously on Firm Performance. This can be seen in the results of simultaneous hypothesis testing or F test, where in the study obtained the F value of cash turnover, accounts receivable turnover, inventory turnover and working capital turnover simultaneously on Firm Performance of 10,791. While the value of Sig. F Change is equal to 0.000 < 0.05 so that cash turnover, accounts receivable turnover, inventory turnover and working capital turnover simultaneously on Firm Performance are significant. So it can be decided to reject H0 and accept H1.

This result is in accordance with the initial hypothesis which presumes that cash turnover, receivables turnover, inventory turnover and working capital turnover will simultaneously have an effect on Firm Performance. This means that during the research period from 2018 to 2020, the attachment of all independent variables has an important influence on the dependent variable. In other words, if cash turnover, receivables turnover, inventory turnover and working capital turnover move together, it will contribute a positive influence on the Firm Performance.

The results of this study are in line with the research of (Noratika, 2014) which shows that simultaneously cash turnover, accounts receivable turnover, inventory turnover and working capital turnover have an effect on Firm Performance. Due to the cash turnover owned by the company is quite large or the cash turnover is said to be above average, so the company can meet its short-term obligations. This is also supported by research by (Wulandari et al., 2017) which states that cash turnover, accounts receivable turnover, inventory turnover and working capital turnover together affect Firm Performance.

The results of this study have the implication that PT. Pegadian (Persero) is expected to pay attention and periodically evaluate related to the application of the maximum limit of cash and cash equivalents, this study found a negative and significant influence between cash turnover and profitability. In addition, the management of PT Pegadaian (Persero) is also expected to evaluate the amount of current assets and current liabilities. Because based on the results of this study found a negative and significant influence between working capital turnover with profitability. Also the management of PT Pegadaian (Persero) is expected to always control the amount of receivables or loans given to the public through credit distribution.

Conclusion

Based on on the results of the analysis and discussion in previous section, the following conclusions can be drawn: Cash Turnover, Account Receivable Turnover, Inventory Turnover and Working Capital Turnover simultaneously affect Firm Performance. The results showed that cash turnover and working capital turnover had a significant negative effect on firm performance, accounts receivable turnover had a significant positive effect on Firm Performance, while inventory turnover had no significant effect on firm performance. Account Receivable Turnover becomes that largest effect to the firm performance. Accounts receivable turnover shows whether a company can collect receivables or credit effectively or not.

Limitation

This **Study** only tests the firm performance on only one object of research, for further researchers, it is expected to be able to conduct research by adding research objects, adding research samples with more diverse characteristics, adding other variables that can affect Firm Performance that the authors have not examined in this study , and conducted a more in-depth study on a larger population in order to improve distribution and better data accuracy. In addition, future researchers are expected to use data analysis techniques that are different from this research.

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Budget Realization Statement Impact of COVID 19 Activities

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Abstract
Disclosure of information in financial statements is important because it will describe the differences in disclosure practices that have been carried out by local government entities, the factors that influence it, and describe the condition of the local government in the reporting period. The increase in the COVID-19 pandemic resulted in a decrease in economic growth in 2020. This decline in growth was partly due to the economic slowdown which resulted in a decrease in state income. The decline in state income was due to a decrease in community economic activity, while there was an increase in spending on the government, especially for the social and health sectors, and there was a reallocation of the budget for its handling. In addition, disclosure is also an important factor in accountability. The purpose of this study is to determine the realization or achievement of the government as accountability for the implementation of its government seen from before the pandemic period compared to the COVID 19 pandemic from all items in the Budget Realization Report in terms of income, expenditure, and financing. The results of the study show that for several budget realization items there are different between before and during COVID-19.
Keywords: budget realization, expenditure, pandemic, revenue, reallocation.

Introduction

Local government financial performance is a description of the achievement of a program or policy that has been planned by the Regional Government for a certain period which can be measured using financial indicators (Saraswati et al., 2019). According to Government Regulation (PP) Number 8 of 2006 concerning Financial Reporting and Performance of Government Agencies, it states that performance is an output or result of an activity or program that is to be or has been achieved in connection with the use of a budget with measurable quantity and quality. The purpose of financial performance reporting is to communicate the implementation of government activities that show effectiveness in aligning government spending to match the budget. In addition, financial performance assessment is also important so that the government can evaluate performance results and assess the benefits and impacts on the community so that local governments can improve their performance to increase the level of accountability to the public (Tama & Adi, 2018). One of the financial reports used to assess this performance is the budget realization report.

At the beginning of 2020 there was a Corona pandemic, the spread of COVID-19 had spread to various countries, the rapid development of the spread of COVID-19 had an impact on many aspects, including social and economic aspects. The increase in the COVID-19 pandemic resulted in a decrease in economic growth in 2020. This decline in growth was partly due to the economic slowdown which resulted in a decrease in state revenue. The decline in state revenues was due to a decline in community economic activity, while there was an increase in government spending, particularly in the social and health sectors. Declining economic activity is causing a rapid deterioration of public finances as revenues fall sharply while expenditure must rise to combat the infection and its social and economic consequences. The situation is generating huge public deficits that may be hard to finance for some countries (de la Fuente, 2020). The government issued a social safety net policy to improve the protection of the community with health programs to provide facilities and infrastructure (COVID-19 Task Force, 2020). There were a number of social policies which included additional recipients of the Family Hope Program (PKH), Staple Food Cards, Pre-Employment Cards, electricity subsidies, additional market and logistical operations, and credit payment relief for informal workers (KSI, 2020) and Village Fund BLT (direct cash assistance) (Roziqin et al., 2021).

The ongoing coronavirus (COVID-19) outbreak has put governments across the OECD under considerable pressure to deliver emergency support to the healthcare sector, households and several sectors of the economy, whose activity was temporarily frozen. Time and operational pressures in delivering emergency support, as well as the extreme economic uncertainty, have altered the

traditional conduct of budgeting. In most countries, important features of an orderly budget process – the fixed budget calendar, macroeconomic and fiscal forecasting underlying the budget process, allocation of resources to specific programmes, channelling of all spending in the budget, etc. – could not be maintained. (Moretti & Leroy, 2020) In order to realize public services to the community, all Regional Governments in Indonesia must annually plan, compile, and implement all activities and funding that have been summarized in the annual financial plan in the form of the Regional Revenue and Expenditure Budget (APBD). The APBD shows the expenditure allocation for implementing programs/activities and sources of income, as well as the financing used to fund them.

These programs are implemented to encourage regional economic growth, income distribution, and development in various sectors. It is hoped that this goal can be achieved by increasing the potential for regional tax and levy revenues plus transfer funds from the central government which are used to fund the provision of adequate and quality public services. With quality spending, it is hoped that the APBD can be an injection for economic improvement and community welfare.

However, as always happens in the management of public finances, namely budgetary constraints, many needs are always faced with limited local revenue sources. Therefore, spending priorities and good planning can be a way of dealing with budgetary constraints. Regarding the occurrence of COVID-19, the most visible difference between the realization posts is Unexpected. Unexpected expenditures are budget expenditures for activities that are unusual in nature and are not expected to be repeated, such as the management of natural disasters, social disasters, and other unexpected expenditures that are indispensable in the framework of administering the authority of the central/regional government. (djpk.kemenkeu.go.id).

Against a background of exceptional budget procedures and, sometimes, challenges with trust in government action (Moretti & Leroy, 2020) clarity on new spending decisions and transparency on actual implementation has been a major concern for most governments. It has been handled in different ways by OECD countries, depending on their national circumstances.

In this regard, nationally it is necessary to conduct an analysis of the financial health of the APBD that can provide useful information in photographing the financial condition of the APBD both in terms of income and expenditure. This analysis aims to provide an overview of the budget realization before COVID-19 compared to the time of COVID-19 as well as the independence ratio and effectiveness ratio of all local governments as many as 542, consisting of provincial, district and city governments.

Literarure review

Based on Government Regulation Number 58 Article 20 of 2005, the Local Revenue and Expenditure Budget (APBD) is a unit consisting of Local Revenue, Regional Expenditure, and Regional Financing. Local Government Revenue (PAD) is the entire potential of regional original economic resources that can be used as regional revenues (Puspita Ayu, 2018). According to Law Number 33 of 2004 concerning Financial Balance between the Central Government and Local Governments, it is stated that Local Government Revenue is regional revenue sourced from regional taxes, regional levies, separated regional wealth management results, and other legitimate Regional Original Revenues. Which aims to provide flexibility to regions in exploring funding in implementing regional autonomy as a manifestation of the principle of decentralization. Optimizing PAD can be done in various ways, namely by identifying the potential and resources of the region, especially sources of income in the context of financing regional development. The greater the delegation of authority from the Central Government to the Regional Government, the local government must make efforts to further increase its PAD (Puspita Ayu, 2018).

In addition to income in the budget realization report, there are expenditures, namely operational expenditures, and capital expenditures. Capital Expenditures are expenditures from a budget carried out by regional governments to obtain fixed assets and other assets that provide a benefit for more than one accounting period, capital expenditures themselves are divided into capital expenditures for land acquisition, building and building capital expenditures, equipment capital expenditures, and capital expenditure on intangible assets (Ministry of Finance, 2020).

Financial performance is a description of the achievement of a program or a policy that has been

planned by the local government for a certain period which can be measured by financial indicators. Performance measurement is considered very important to assess the accountability of an organization in producing better public services. Accountability is not just the ability to show how public money is spent but includes the ability to show that public money has been spent economically, efficiently, and effectively. The purpose of financial performance is as a report on the operation of government activities that aims to assess the financial performance of the organization in terms of efficiency and effectiveness and monitor actual costs with budgeted costs. Government financial performance can be measured using the Effectiveness Ratio (Sari, 2018). The measurement of government financial performance based on the effectiveness ratio is obtained from the ability of the Regional Government to realize the planned PAD compared to the target that has been set based on the real potential of the region. The ability of the local government is said to be effective if it is in financial management if the effectiveness ratio reaches more than 100%.

This study aims to compare the budget realization and see the government's financial performance during the pandemic and before the pandemic. So that this research is useful to provide an overview of which sectors should get more attention and provide an overview of the achievements to the public from government performance

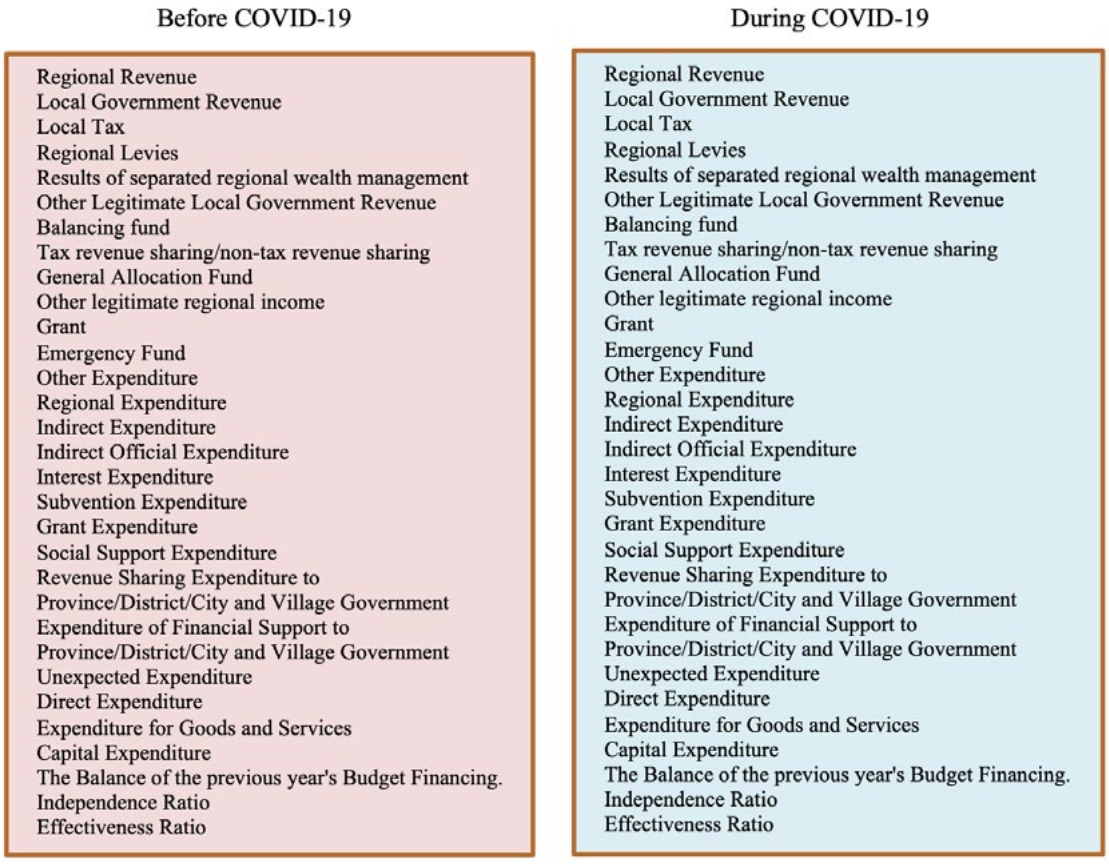
From the literature review above, a hypothesis can be proposed:

H1 : There is a difference in the realization of the budget before and during COVID- 19

H2 : There are differences in government performance before and during COVID- 19

As an illustration the contents of the budget realization report which includes income and expenditure and in addition is independence and effectiveness ratio framework is presented in the following figure:

Figure 1. Budget Realization and Performance Before and during Covid-19



Research Methodology

The method used in this study is a quantitative research method using 29 variables, based on the purpose this research is a descriptive type of research. The population in this study is the report on the realization of the provincial, city, district government budgets in Indonesia in 2018-2021 semester I with a saturated sampling technique of 542 local governments which is found on the official website of the Directorate General of Finance (http://djpk.kemenkeu.go.id). Data analysis carried out statistical analysis with different tests.

Findings

From the results of data processing (Table 1), it was found that the realization of the budget prior to the occurrence of COVID-19 compared to the time of the occurrence of COVID-19 which experienced differences in budget realization was Tax revenue sharing/non-tax revenue sharing, grants, other expenditure, Indirect Official Expenditure, Interest Expenditure, Expenditure of Financial Support to Province/District/City and Village Government, Unexpected Expenditure, Direct Expenditure, Capital Expenditure.

Table 1. Paired Samples Test

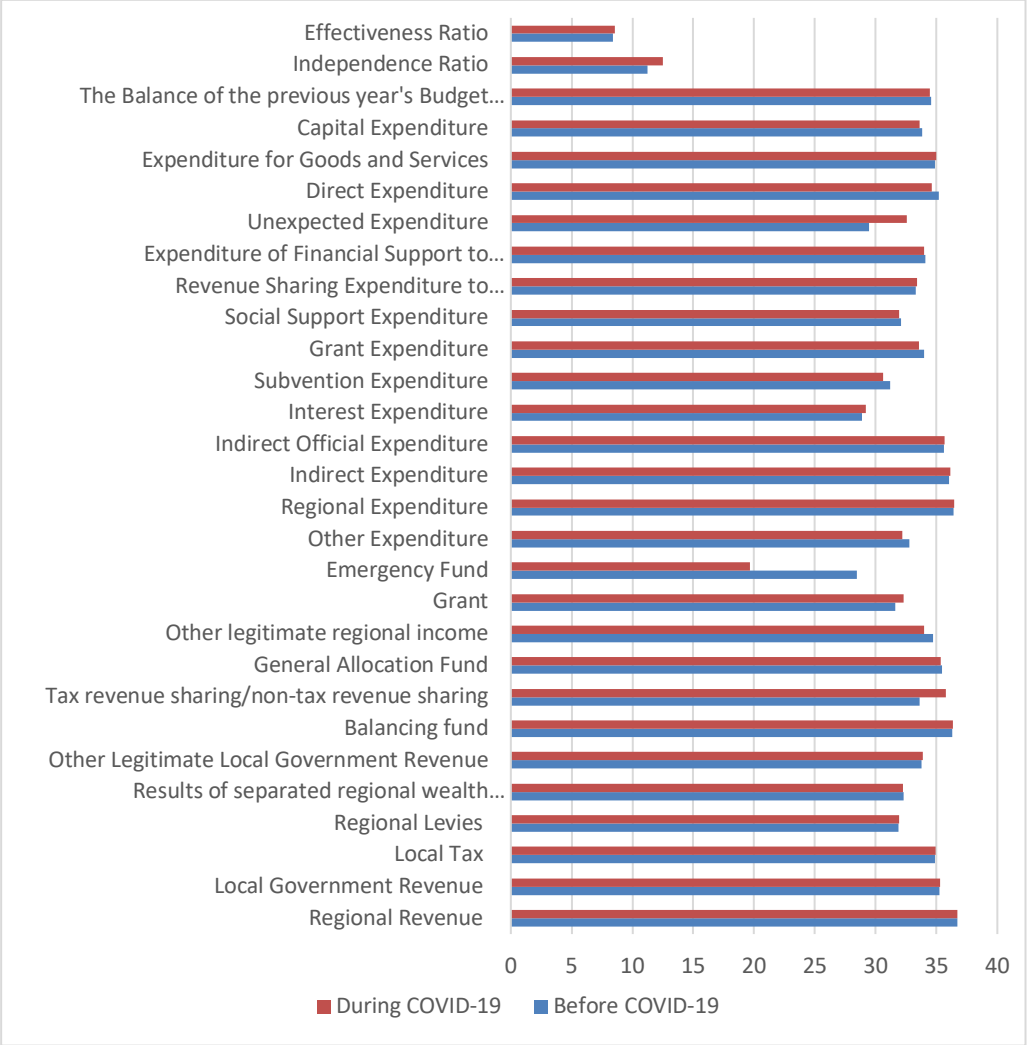
	Sig.(2-tailed)
Pre-Post Regional Revenue	.280
Pre-Post Local Government Revenue	.210
Pre-Post Local Tax	.341
Pre-Post Regional Levies	.562
Pre-Post Results of separated regional wealth management	.432
Pre-Post Other Legitimate Local Government Revenue	.072
Pre-Post Balancing fund	.026
Pre-Post Tax revenue sharing/non-tax revenue sharing	.000
Pre-Post General Allocation Fund	.029
Pre-Post Other legitimate regional income	.000
Pre-Post Grant	.000
Pre-Post Emergency Fund	.081
Pre-Post Other Expenditure	.033
Pre-Post Regional Expenditure	.190
Pre-Post Indirect Expenditure	.006
Pre-Post Indirect Official Expenditure	.000
Pre-Post Interest Expenditure	.033
Pre-Post Subvention Expenditure	.492
Pre-Post Grant Expenditure	.012
Pre-Post Social Support Expenditure	.247
Pre-Post Revenue Sharing Expenditure to Province/District/City and Village Government	.460
Pre-Post Expenditure of Financial Support to Province/District/City and Village Government	.009
Pre-Post Unexpected Expenditure	.000
Pre-Post Direct Expenditure	.000
Pre-Post Expenditure for Goods and Services	.000
Pre-Post Capital Expenditure	.000
Pre-Post The Balance of the previous year's Budget Financing.	.528
Pre-Post Independence Ratio	.000
Pre-Post Effectiveness Ratio	.656

Regional revenue and especially local government Revenue, there is no difference because the government is still making efforts to realize its income, even in the COVID-19 conditions and for total revenue there is assistance from the central government which is a component of revenue. For comparison, the one who experienced a surplus during the covid period was Russia. Russia entered

2020 with an enormous budget "airbag". In addition to US $600 bln in international reserves, the Russian federal budget faced a surplus of US $15 bln, due to the2% increase in VAT in 2019 and a major underspending on investment programmes in 2019. Moreover, Russia could boast US $170 bln in its National Welfare Fund (NWF) as extra revenue from oil and gas, regulated by a so-called budget rule (Vakulenko et al., 2020).

The COVID-19 pandemic has affected the allocation of capital expenditures. Local governments have not been able to focus funds on the realization of capital expenditures so that the realization has not been maximized. During a pandemic, local governments must readjust their spending budgets, when a pandemic occurs, many developments are suspended, and available funds are allocated for expenditures in handling the pandemic. Budget reallocations occurred including capital expenditure shifting to unexpected expenditure posts to handle the pandemic (Rahayu, 2021).

Figure 2. Average Budget Realization and Local Government Performance



Unexpected Expenditure, there was a significant increase, from the realization of the budget the difference between before and during COVID-19. This unexpected expenditure is a budget expenditure on the APBD burden for emergencies including urgent needs as well as refunds for overpayment of regional revenues in previous years. At the time of this COVID-19 there was a reallocation of budgets, At the individual country level, each country's immediate budgetary responses to COVID-19 have targeted poor and vulnerable populations, mainly migrants and informal sector workers with limited access to social safety nets (Upadhaya et al., 2020). Overall, there was no difference in total regional expenditures, but in expenditure posts directly related to handling COVID-19, there were differences. In planning, expenditure for natural disasters must be allocated the amount of costs because these disasters cannot be avoided so that when they occur, they do not interfere with

other expenses and there is no significant reallocation of the budget. In all countries, however, reallocations and reserves embedded into budgets fell short from providing the funding required by very large COVID-19 fiscal packages. Reserves embedded in the annual budget are typically at funding "small size" unexpected events rather than absorbing large shocks. In the event of a large shock, countries would have to rely on larger "rainy-day funds" (Moretti & Leroy, 2020).

However, this issue was rarely or never high on the agenda of political systems. To be able to respond effectively to a new pandemic disease at the national level, two key factors are needed. The first is the presence of political will and determination to preserve and protect the population from the disease. To do this, it is necessary for government to take very unpopular, but necessary measures in a dangerous epidemiological situation such as pandemics. The second factor, but no less important, it is necessary for governments to have a permanent reserve of significant financial and material resources. In the occurrence of the risk event, these resources will be immediately directed to strengthening of the health system. The considerable reserved financial resources must be spent for support on diverse sectors (transport, tourism, retail, services, culture, sports, creative activities), which will inevitably suffer after the introduction of restrictive measures. This scenario might be possible for countries with adequate resources or simply rich countries. Governments that do not consider the above factors will be unable to fully respond to the pandemic (Ali Maher et al., 2021).

Government performance shows only the independence ratio experienced a difference. From the average value of the level of independence during COVID-19, local governments are expected to be independent in exploring the potential of their regions which will be used for regional expenses, so in this case the regional government does not depend on the central government. From a revenue perspective, the finance system for local government has been subject to many calls for comprehensive reform (Governing England: Devolution and Funding, 2018). This has included grants from central government which have greatly reduced as part of austerity-localism policy (Sandford, 2016). The two main local sources of funding have also remained largely stagnant (Ahrens & Ferry, 2020)

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Model of Business Analytics Capability: How It Affects Firm Performance

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Abstract

Business analytics is essential for business to stay relevant and success in this digital era. The availability and abundance of data could support or even be the basis in understanding complex situation nowadays. However, the utilization of data in business analytics does not always lead to superior performance. Therefore, it is important to explore how business analytics can improve firm performance. The objective of this study is to understand how business analytics can affect firm performance. This research provides guidance for managers in utilizing business analytics in order to improve firm performance. In addition, it is also expected to make scientific contributions in the study of dynamic capabilities, since business analytic ability is a form of capability. This study using systematic literature review to build a conceptual model. The articles collected from several top scientific databases namely Emerald, InderScience, SAGE, Science Direct, Springer Link, and Taylor & Francis. We found 375 articles that match the search strings. Those articles then filtered by duplication, language, journal quality, and content relevance. There are 22 articles that meet the research criteria and are used for modeling analysis. This study succeeded in collecting various variables and creating a causal model of the relationship between business analytical capabilities and firm performance.

Keywords: Business analytics; business analytics capability; firm performance; systematic literature review; conceptual model.

JEL Classification: O33, M15

Introduction

Global business conditions have changed a lot, especially with the fourth industrial revolution and the Covid-19 pandemic. With these conditions, companies have become increasingly dependent on modern technology and are required to be more agile and innovative to respond quickly to their business needs. To achieve this, organizations must rely on data science with the help of developed information technology (Chatterjee, Rana, et al., 2021). Business analytics (BA) capabilities have the potential to provide value and result in better company performance (Cosic et al., 2015). BA systems provide benefits to organizations by enabling business process improvements, company performance, and creating competitive advantages (T. Davenport & Harris, 2007). Although empirical evidence suggests that the BA system brings benefits to organizations (Allmendinger & Lombreglia, 2005; Kohavi et al., 2002; Piccoli & Watson, 2008), few studies provide a solid theoretical basis for understanding how and why these benefits are achieved. The theory of the firm's resource-based view provides this theoretical basis (Cosic et al., 2015).

Several studies have shown that most of the growing organizations are investing heavily in developing BA tools (Cosic et al., 2015; Dahabiyeh et al., 2020; Oesterreich & Teuteberg, 2019; Sedera & Lokuge, 2019; Sha et al., 2020). According to Accenture and General Electric, 89% of organizations globally are beginning to believe that they will incur a loss if they do not adopt BA tools to achieve sound business decisions through improving their business processes (Bakotic & Krnic, 2017; Columbus, 2014; Maldonado et al., 2020). However, despite the popularity of business analytics, there is controversy as to whether the acquisition of BA capabilities can improve organizational performance and business value by improving business process performance through accurate real-time business decisions (Akter et al., 2016; Ramanathan et al., 2017).

The use of business analysis for organizational value creation relies on the role played by organizational decision-making processes, including resource allocation processes and resource

orchestration processes (Helfat et al., 2009; D. J. Teece et al., 1997) which require deeper examination and understanding. Big Data Analytics (BDA) as a capability will affect the performance of a process-oriented company (Wamba et al., 2017) and through value (Fosso Wamba et al., 2019). Big data has high operational and strategic potential for business value creation and is the next big thing in innovation (Gobble, 2013), because it creates actionable ideas for corporate performance and competitive advantage (Wamba et al., 2017).

Several studies that have been described previously prove that business analytics can affect company performance and business value. However, there are no studies that explain how the acquisition of business analytic capabilities can improve organizational performance with real-time decision making (Loukis et al., 2019). In addition, there is also no research that examines how the acquisition of business analytic capabilities can affect business processes and business decisions to improve organizational performance, which in turn triggers business value (Chatterjee, Rana, et al., 2021). The study of Cosic et al. (2015) has succeeded in creating a business analytic capability framework that affects performance. However, until now there are still few complete models or frameworks that explain how business analytics can affect company performance.

In accordance with the background of the problem, the researcher can formulate the problem in this study is "how does the business analytical capability relationship model affect the company's performance?" Based on the formulation of the problem above, the purpose of this study is to formulate a business analytical capability relationship model so that it can affect the company's performance.

LITERATURE REVIEW

In this section, two areas of relevant literature are reviewed. These include: (i) the resource-based view and dynamic capabilities; and (ii) BA capabilities and frameworks.

Resource-Based View and Dynamic Capabilities

The resource-based view is the dominant theory in the field of strategic management research (Barney, 1991). It conceptualises organisations as bundles of capabilities and resources. In the resource-based view a capability is the ability to utilise resources in order to perform a certain task (Wernerfelt, 1984). These resources may be tangible (e.g. technology and people) or intangible (e.g. data, processes, skills and knowledge) (Barney et al., 2001).

A limitation of the resource-based view is that it is relatively static, and does not take into account the rapidly changing nature of dynamic business environments (D. Teece & Pisano, 1994). Dynamic capabilities were conceptualised in order to overcome this limitation (Barreto, 2010). Dynamic capabilities enable organisations to continuously renew and reconfigure their resource base in order to keep pace with rapid changes in the business environment. Dynamic capabilities comprise three organisational routines: sensing, seizing and reconfiguration (D. J. Teece, 1997). Sensing and seizing involve identifying and prioritising BA-enabled business opportunities. Reconfiguration involves implementing selected BA-enabled business opportunities by creating new resource configurations (Helfat et al., 2009; Shanks & Sharma, 2011).

Business Analytics Capability and Framework

Previous research has shown that investment in Business Analytics (BA) is a necessary but not sufficient condition for value creation and benefit realization (Hannula & Pirttimaki, 2003; Sam Ransbotham, 2016; Yeoh & Popovič, 2016). Some authors argue that a better understanding of Information System (IS) business value can only emerge by exploring the value creation process in the context of a particular IS technology (Elbashir et al., 2011; Fink et al., 2017; Trieu, 2017). Understanding the ways in which organizational benefits from using BA are delivered requires integrating what is known about information technology value creation while taking into account the unique features of BA.

Using the dynamic capabilities perspective, (Božič & Dimovski, 2019) defines the use of BA in organizations as low-level dynamic capabilities that organizations can leverage to create cutting edge knowledge in dynamic environmental settings. BA enables organizations to define knowledge creation routines as an important dynamic capability and to process large amounts of information through

information processing capabilities, thereby facilitating knowledge creation (Chen et al., 2015; Olszak, 2014; Shollo & Galliers, 2016).

Different studies have attempted to study the impact of BA on mediating organizational performance through the performance of real-time business processes and decisions (Dennehy & Conboy, 2019; Klatt et al., 2011; Sharma, 2014; Tang & Chen, 2020; Troilo et al., 2016). This study has emphasized the importance and effectiveness of resources. Resources are used by the organization to perform better. This concept is based on the Resource-Based View framework. Studies reveal that the acquisition of BA capabilities can enhance the learning experience and help to revitalize businesses and to obtain adequate performance improvements (Chatterjee, Rana, et al., 2021; Ramanathan et al., 2017; Shehata & Montash, 2019; Siala et al., 2019; Wójcik, 2015). Other studies have shown that BA is associated with various applications and processes that include the collection, storage and analysis of big data (Bayrak, 2015). BA involves leveraging big data through qualitative and statistical techniques as has been found in other studies (Chae et al., 2014). Studies also highlight that BA helps create a fact-based management system (Bayrak, 2015; Holsapple et al., 2014). BA is defined as a set of technical and business activities with a collection of processes and tools for moving, manipulating, and analyzing the business environment (Sun et al., 2017). Studies reveal that acquiring BA capabilities can create business value and help towards the best use of resources (Chatterjee, Rana, et al., 2021; Hindle & Vidgen, 2018). The existing literature appears to have advocated how the acquisition of a BA capability can ensure success in an organization's business. Overall, previous findings suggest that information systems capabilities are more likely to generate competitive advantage than information technology resources. Furthermore, the existing information systems literature provides broad support for the relationship between information systems capabilities and organizational value and competitive advantage (Bhatt & Grover, 2005; Johnston & Carrico, 1988; Saraf et al., 2007). This is very important because business analytic capabilities are also information systems capabilities.

There are a number of maturity frameworks for business analytics and business intelligence (BI) capabilities, both from the academic and practical literature (see for example (T. H. Davenport et al., 2001; Eckerson, 2009; Raber et al., 2012; Watson et al., 2001; Yeoh & Koronios, 2010). The (T. Davenport & Harris, 2007) model derives from extensive industry experience and case studies from world-leading analytical organizations. For this reason, the model has a high degree of practical relevance but lacks theoretical foundation. In contrast, the BA capability maturity model proposed by (Raber et al., 2012) does have a theoretical basis. For example, (Raber et al., 2012) used the IS success model and the underlying theoretical foundation as the basis of their model. The model consists of 58 BA capabilities grouped into five distinct areas that represent IS concepts including: (i) strategy, (ii) social systems, (iii) technical systems, (iv) quality and (v) use/impact. Like the (T. Davenport & Harris, 2007) model, the (Raber et al., 2012) also have practical relevance. This is because BA practitioners, specialists and executives play a key role in the development and evaluation of the model. The limitation of the model mentioned above is that it does not incorporate dynamic capabilities. (Becker et al., 2010) argue that in an era of rapidly changing business environment, a resource-based view, particularly dynamic capabilities, should be used as a theoretical foundation for the maturity of the BA model.

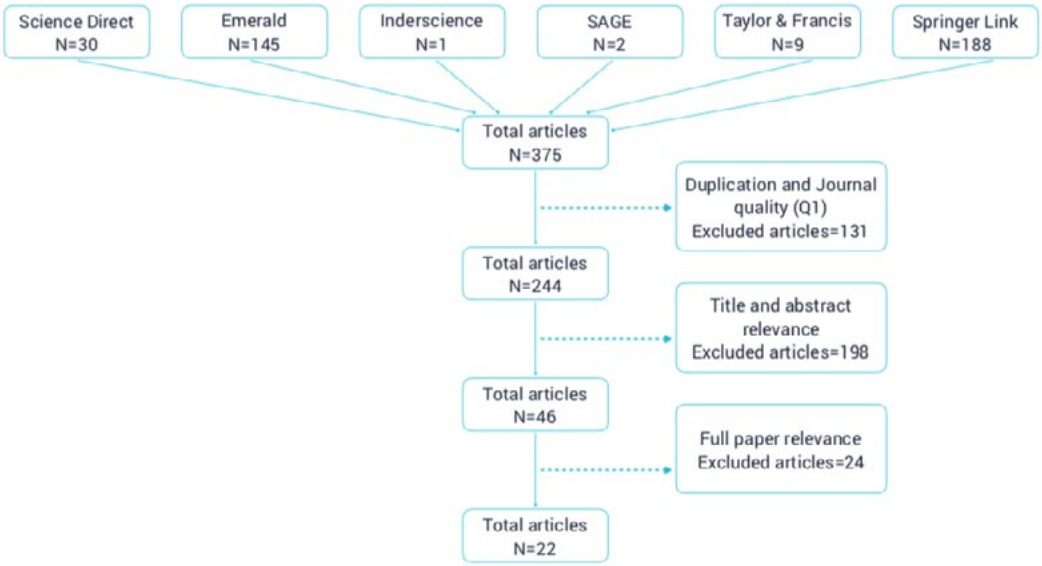
Methods

This study uses a semi-systematic/narrative literature review (Snyder, 2019) with a descriptive approach. This is done to get a more comprehensive picture of a broad topic (Wong et al., 2013) because research on BA is distributed in several different scientific domains, mainly in IS and IT. There are several steps taken in this research. The first step is to define conceptual boundaries. The limitation in question is to determine the definition of BA: 'the ability to utilise resources to perform a BA task, based on the interaction between IT assets and other firm resources' (Cosic et al., 2015). While the second conceptual limitation is to determine the performance as the end result or the dependent variable, both in the form of financial and non-financial.

The next step is to determine which studies are included in this review. First, based on the database, we use five leading publishers across fields and cover business and management domains namely Science Direct, Emerald, InderScience, SAGE, and Taylor & Francais. Second, we define the

formula string for the search: (TITLE-ABS-KEY (("business analytics" OR “data analytics” OR “business intelligent”) AND (model OR relationship OR effect OR impact) AND ("firm performance” OR “business performance”) AND DOCTYPE (ar) AND (LIMIT-TO (LANGUAGE, "English")).

In the next step, we examined duplication, journal quality, and journal scope. In determining the quality of journals, we use data from the Scimago Journal Ranking and those which included in Q1. Meanwhile, we check the scope of the journal from the homepage of each journal. Our final step is to review the content of the selected articles to determine their relevance, namely according to the conceptual boundaries and research objectives. The result of each literature search steps can be seen in Fig. 1.



Results

A total of 22 articles were selected through screening based on duplication, journal quality, journal scope, and relevance. The articles published in five journals as shown in Table I below.

Journal	Author & Year	Number of articles
Business Process Management Journal	(Anaya et al., 2015); (Rialti et al., 2018)	2
Journal of Business Research	(Wamba et al., 2017); (Mikalef et al., 2019); (Aydiner et al., 2019); (Olabode et al., 2022)	4
Journal of Knowledge Management	(Y. Wang & Byrd, 2017)	1
Production Planning & Control	(Ramanathan et al., 2017)	1
Information & Management	(Krishnamoorthi & Mathew, 2018); (Song et al., 2018)	2
Management Decision	(Ferraris et al., 2019); (Medeiros & Maçada, 2021)	2
Technological Forecasting and Social Change	(Rialti et al., 2019)	1
Annals of Operations Research	(Fosso Wamba et al., 2020); (Chatterjee, Chaudhuri, et al., 2021)	2
International Journal of Information Management	(Maroufkhani et al., 2020)	1
International Journal of Production Research	(Vitari & Raguseo, 2020)	1
Research in Transportation Business & Management	(C. Wang et al., 2020)	1
International Marketing Review	(Akter et al., 2021)	1
Journal of Computer Information Systems	(Jaber & Abbad, 2021)	1
Journal of Enterprise Information Management	(Contreras Pinochet et al., 2021); (Rahman et al., 2021)	2
Total		22

Based on publication year, the selected articles are as follows.

Year	Number of articles
2015	1
2017	3
2018	3
2019	4
2020	4
2021	6
2022	1
Total	22

Furthermore, the variables involved we grouped according to the nature of the relationship as follows.

Type	Independent	Mediating	Moderating	Dependent	Control
Variables	IT Human assets (2);	BA Adoption (4); Agility	Adoption Level (2);	Firm Performance (7); Business	Technology Turbulence; Market

	Technology assets (3); Top level support; Complementary investment in organizational strategy, structure, process, culture; Number of application; Business type governance; Buy type; Business pressure; Market environment; Relationship assets; BDA-Capable Business Process Management System; Enterprise Innovation Systems; BA Capability (6); Data; Organization; Process; Context; BDA Business Value; Competitive Intensity; BDA-Enabled Sensing Capability; BA Adoption (3); BDA Driven Strategic Orientation; Effective use of data aggregation	(3); Process Design; Process-Oriented Dynamic Capabilities; Knowledge Management Orientation; Ambidexterity; Disruptive Business Model; Market Performance; Data-Driven/Analytics Culture (2); Customer Relationship Management Linking Capabilities; Market Information Processing Capabilities; Business Process Performance; Absorptive Capacity; Big Data Visualization; Process Oriented Dynamic Capabilities; Green Supply Chain Management; Firm Ecosystem Scanning; Product Innovation; Process Innovation; Firm Performance; Holistic Marketing Decision Making	IT Integration Level; Trust; Dynamism; Manificence; Organization information management system-Fit; Organizational Resistance to information management; Analytics Value Enhancer; Organizational Level Variables; BDA Capability; Product Variety; Competitive Intensity; Leadership Support	Performance (2); Sustainability Performance; Market Capitalizing Agility; Operational Adjustment Agility; Process Innovation; Data-Inspired Innovation; Financial Performance (2); Market Performance (2); Performance (2); Organizational Performance; Anticipated Financial Performance; Customer Linking Capability; Strategic Business Value; Sustained International Growth/Performance; Decision Making Effectiveness; Competitive Advantage (2); Product Innovation Performance; Business Value; Firm's Competitive Marketing Performance	Factor/Turbulence (2); R&D Level (Intensity/Expenditure) (2); Firm Size (2); Firm Age (2); Industry (2); Competitive Environment; Regulations

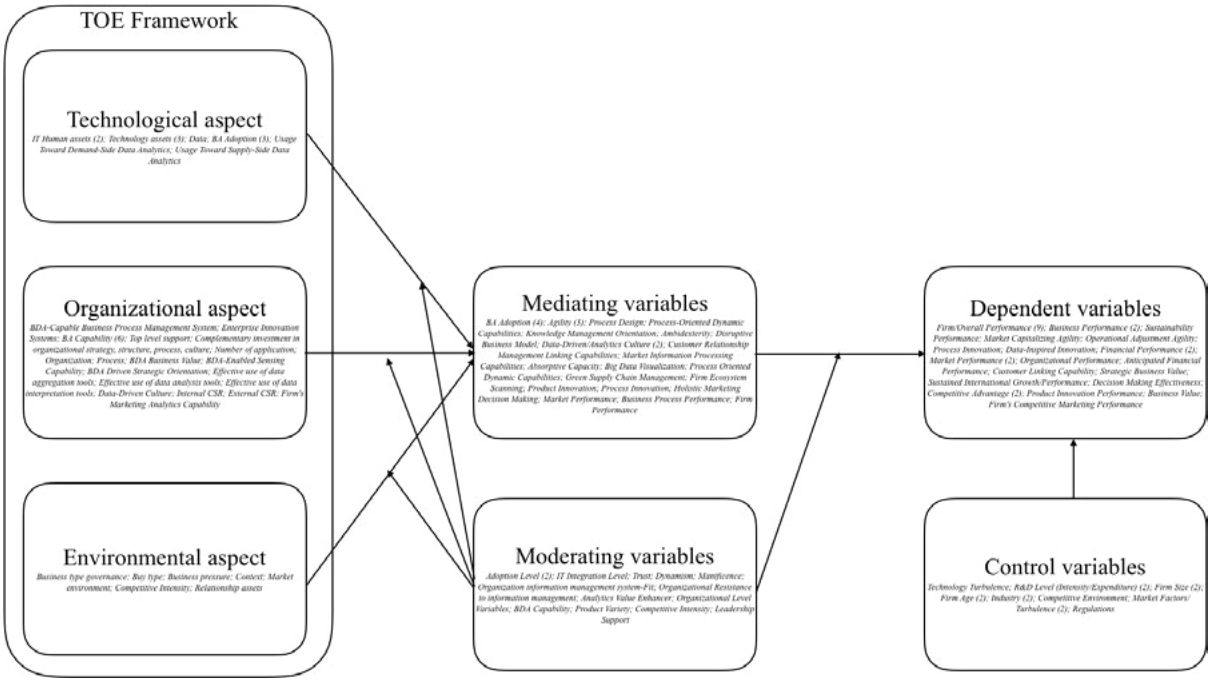
	tools; Effective use of data analysis tools; Effective use of data interpretation tools; Data-Driven Culture; Internal CSR; External CSR; Usage Toward Demand-Side Data Analytics; Usage Toward Supply-Side Data Analytics; Firm's Marketing Analytics Capability				
Total	31	21	13	20	8

Discussion

The purpose of this study is to model the causal relationship of business analytics capability to company performance. Several studies have formulated a business analytics capability model but have not described its relationship to company performance and some are a maturity framework. From the results of a systematic literature review analysis of 22 articles, we were able to identify and develop a relationship model of business analytics capability on company performance.

The focus of this research is on the relationship between business analytics capability and company performance, therefore we combine BA capability with BDA capability because basically they are both skills in business analytics. We find that BA capability affects the company's performance, either directly or indirectly. In addition, this relationship is also moderated by several other variables such as leadership support, level of integration, other variables at the organizational level, as well as environmental variables such as the intensity of competition. BA capability can also act as a variable that moderates the effect of other variables on company performance. In general we found the TOE framework quite useful for grouping the various independent variables involved in this model. In more detail, we formulate the relationship model in Fig. 2 below.

Figure 2. Conceptual Model of the Relationship Between BA Capability and Firm Performance



Our model complements several previous studies related to BA capability. Departing from the perspective of RBV and dynamic capability, our model also contributes conceptually to better understand how BA capability can affect company performance.

Conclusion

To be able to compete in today's digital era, companies need to rely on data to improve the quality of strategic decisions and operational activities. BA is a way to be able to utilize data for the benefit of the company. However, not all companies that adopt BA are able to improve their performance. Through BA Capability, the company is able to improve its company performance. Several studies have proposed a BA Capability framework, some are maturity frameworks, while others are more focused on the subdimensions of BA Capability. By using a systematic literature review, this study succeeded in formulating a causal model of BA Capability in relation to company performance. Our findings have a conceptual contribution to understanding how BA Capability can affect firm performance. Our findings are in accordance with the view of RBV and dynamic capability which are widely used in IS and IT study domains.

In this study we utilize the TOE framework to categorize the various types of variables involved. Conceptually, BA Capability has an important role for companies to be able to utilize data to be able to compete because it is not only a predictor, but BA Capability can also act as a moderator of the relationship of other variables to firm performance.

Limitation

Our research has several limitations, including in terms of database, analytical methods, depth of study, and simplification or conceptualization. First, the database we use is limited to a few leading publishers, but not all high-quality journals are managed by the publisher. So of course there may be high-quality articles that are not covered by our analysis because they are not published by the publishers we use. Then, we used Scimago JR to determine journal quality and selected only journals in the first quartile (Q1) in our study. However, there are some relevant articles that we found in journals that are in the second quartile. This may be input for future research to consider journals with quality not only Q1 but also Q2.

In terms of analytical methods, we use content analysis which may have subjective bias even though we have carried out cross-checking efforts involving three researchers to assess the suitability of articles with research criteria. Meanwhile, from the depth of the study, we carefully read and studied various relevant articles, but it is certainly not an easy thing to elaborate on the overall findings of these

articles, especially because of the different concepts and theoretical backgrounds used. Therefore, for future research, it is necessary to examine more deeply the theoretical background and concepts used by other articles so that they have a more comprehensive level of elaboration.

Finally, the model that we have developed is only collecting, not yet at a more in-depth conceptualization stage. Therefore, in the next research, it is necessary to conceptualize or simplify the variables involved, for example using the clustering method, Delphi, or other methods.

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THE QUALITY AUDIT OF LOCAL ACCOUNTING FIRMIN INDONESIA

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Abstract
The purpose of this study is to examine the quality and size of KAP audits, especially related to regulations issued by the Ministry of Finance of the Republic of Indonesia and the professional organization of the Indonesian Institute of Certified Public Accountants (IAPI) regarding the practice of CPAs and Accounting Firms. This research uses a qualitative case study approach using the QDA Miner 5 tool for data processing, with triangulation techniques. Literature review and interviews were conducted to obtain answers to research questions. An important finding of this study is that laws and regulations regarding the practice of CPAs and Accounting Firms in Indonesia are considered to be more favorable to large, internationally affiliated accounting firms, which already have a competitive advantage over local accounting firms. A number of obligations that must be paid by CPAs and local accounting firms become obstacles that are difficult to overcome because of limited work and finances. There is potential, accounting graduates in Indonesia are not interested in becoming a CPA and working in an accounting firm because the costto get a CPA certification is expensive and difficult to achieve, the annual fee for a CPA is expensive, but the salary earned is low.
Keywords: **Audit Quality, Accounting Firm, Accounting Firm Size, CPA JEL Classification Code: M41, M42, M48**

1. INTRODUCTION

Along with the application of auditing standards based on International Standards on Auditing (ISA) which are the products of the IAASB to replace the previous standard, there have been substantive and fundamental changes in auditing standards. IAASB actually is anindependent agency under IFAC. In terms ofutility, this change addresses many of the challenges facing the auditor in dealing with the taken risks while accepting and executing the audit engagement (Tuanakotta, 2013).[1] Some fundamental changes in conducting currentaudit activities include: (1) Risk-Based Audit; (2) Changes from Rules-Based Standards to Principle Based Standards; (3) Professional judgment replaces mathematical models; (4) The application of Professional Skepticism by involving partners in each engagement; (5) The attribution of client's internal control result review to the audit procedure, as both of them cannot be separated; (6) Those Charged With Governance, Auditors must communicate with them. (Tuanakotta, 2013). Several cases of financial statements that occur around the world involving audit services also affect the practice of Public Accounting Firms in Indonesia. The auditor is accused ofnot being able to work independently and ethically as well as not being able to carry out early detection of fraud cases during the audit. This creates a gap in expectations between usersof audited reports and audit service providers (Accounting Firms). The Enron case is one of the major cases used as an example of an anomaly involving the world's largest accounting firm. When looking back at the thought of the historical development of auditing, we cannot ignore the contribution of Mautz & Sharaf who wrote a philosophical study of auditing in a book entitled. The Philosophy of Auditing. They say that inauditing, the concept of independence is important because it becomes the basis forauditors in auditing practices. (Mautz & Sharaf,1961). The statement of Mautz and Sharaf isbuilt on the background of the situation andconditions that occurred at that time when the audit was only considered by most practitioners as a practical examination method. Auditing is not a science that has a strong conceptual framework and theoretical foundation generatedthrough a philosophical process. Mautz andSharaf argue that audit actually has a strongtheoretical framework. In another section, Mautz and Sharaf explain, auditors needevidence so that they can rationally assess thepropositions of financial statements submitted tothem. To the extent that he makes judgmentsand forms his opinion on the basis of sufficient evidence, then he has acted rationally byfollowing a systematic or methodical procedure.Today, the idea of Mautz and Sharaf is important, as ISA standards re-adopt theirphilosophical ideas.Mautz &

Sharaf's descriptions conclude that (1) the Audit process requires the existence of a conceptual theory that is able to combine theory and practice; (2) In the audit process, the auditor needs sufficient and competent evidence to conduct a complete analysis of the audited financial statements. So, s/he is able to create an accurate, rational, and performative decision. The expositions described by Mautz and Sharaf in 1961, especially on professional judgment are re-established at present time through ISA-based auditing standards, in response to a number of emerging audit cases around the world, resulting in a decrease of public confidence towards auditors. The brilliant idea of Mautz and Sharaf 50 years ago written in The Philosophy of Auditing aboutprofessional judgment, is left and abandoned fora while. The auditing practice then turns to the assurance model brought by the USA through the world's largest Accounting Firms that onaverage are based there. The assurance model uses a mathematical and statistical approach as an auditing model. As a result, the auditor loses his or her power of reason and critical power over the object being audited. The upcomingimpact of that choice is auditors' failure to detect financial statement fraud. (Tuanakotta, 2011).

In terms of audit quality, there is a number of researchers that have tried to define what audit quality is, and what variables that affect audit quality. The audit qualities cited by GAO (Government Audit Organization) are as the followings: (1) It is conducted "in accordance with Generally Accepted Auditing Standards (GAAS) to provide reasonable assurance that the audited financial statements and related disclosures are suitably presented with the generally accepted accounting principles, and (2) There is no material misrepresentation, whether it is caused by mistake or by fraud. (Dauber, Qureshi, Levine, & Siegel, 2008). The Audit Quality Framework of the FRC (Financial Reporting Council, 2013) states that there are five key drivers of audit quality, including (1) audit firm Culture, (2) the personalskills and qualities of partnering auditor; andauditor staffs, (3) audit process effectiveness (4) the reliability and usefulness of the audited report, and (5) factors beyond the auditor's control that affect the quality of the audit. While the IAASB (International Auditing and Assurance Standards Board), an independent body under IFAC (International Federation Accounting Council) states that Audit Quality islikely to be achieved when the auditor's opinion is based on sufficient and appropriate audit evidence. (IFAC, 2010). The studies that have been done by some experts on audit firm size and its impact on audit quality, provide various conclusions. One of the examples is the research finding conducted by DeAngelo (1981) that states that the accounting firm's size gives effect to audit quality. Audit quality is contains two aspects: (1) auditor competence to detect misrepresentations and, (2) auditor independence to report such misrepresentations. Research by Mansouri et al. (Mansouri, Pirayesh, & Salehi, 2009) show that IACPA specialization is very influential on fraud detection. In addition, IACPA member competencies also affect its ability to detect fraud. Large accounting firms tend to have experts who have particular specialization. Research conducted by Jong Hag et al. (Jong Hag, Kim, Kim, & Zang, 2010) indicates that office size has a significantly positive relationship with audit quality and audit costs. This positive relationship supports the view that large local accounting firms provide high-quality audit services compared to small local accounting offices. Research from Weiner (2012) yields findings that the reputation of the Big-Four auditor is a signal of credibility. It creates company's' added value in the eyes of shareholders. Research by Sawan et al. (Sawan & Alsaqqa, 2012) states that the big four is superior to non-big-four, and that the size ofaccounting firm size is positively related to audit quality. Similar research result conducted by AlKhaddash et al. (AlKhaddash, Zarqa, Al Nawas, & Ramadan, 2013) has also shown a positive and significant correlation betweenaudit quality and audit efficiency, audit firms reputation, audit cost, audit firms size, and auditor competence. Furthermore, Domenico Campa (Campa, 2013) argued that the oligopolistic structure of the audit market created "excessive" audit fees, necessitating House of Lords intervention. The results of his research stated that urgent intervention was needed because the high audit fees by the big four were not accompanied by an increase in service quality. Vaicekauskas (Vaicekauskas, 2014) study in Lithuania imply that the International audit firms and local audit firms provide the same level of added value, and the same audit performance, to their clients without any significant difference. The phenomenon that occurs in Indonesia today, the audit market is dominated by the big four and by non-big-four accounting firms that have international affiliations. Regulations from authorities in Indonesia and demands for applicable audit practice standards have "led" accounting firms in Indonesia to be "forced to merge". If the accounting firm has capital, then it

"must" be affiliated or become a member of an international accounting firm, or international accounting organization. This condition has an impact on the existence of a local accounting firm, or a newly established accounting firm. They face a situation of unfair market competition and professional demands that tend to be unfair, arguing that "ISA-based audit quality" is used as legitimacy for authorities. Under these conditions, the research questions asked are: (1) What are the opinionsof local public accountants about the size of the accounting firm and its effect on audit quality inIndonesia; (2) What is the opinion of local public accountants regarding regulations issued by authorities in the Ministry of Finance and professional organizations, regarding the practice of accounting firms in Indonesia and how the future of the local public accounting profession in Indonesia.

2. LITERATUR REVIEW

2.1. Auditing

Hayes et al. (Hayes, Dassen, Schilder, & Wallage, 2005), said that the function of auditing is to lend credibility to the financial statements. The financial statements are the responsibility of management. In the audit process, the auditor enhances the usefulness andthe value of the financial statements and, increases the credibility of other non-audited information released by the management. An audit is an independent, objective, and expert examination and evaluation of evidence.

William F. Messier, Steven M. Glover, and Douglas F. Prawitt (2008) define auditing as a systematic process of objectively obtaining and evaluating evidence regarding assertions about economic actions and events to ascertain the degree of correspondence between those assertions and established criteria and communicating the results to interested users. The auditor compares the evidence gathered to assertions about economic activity in order to assess the degree of correspondence between those assertions and established criteria. (Messier, Glover, & Prawitt, 2008). According to Arens, et.al (Arens, Elder, & Beasley, 2012) auditing is the accumulation and evaluation of evidence about information to determine and report on the degree ofcorrespondence between the information and established criteria. Auditing should be done by a competent, independent person. To do an audit, there must be information in a veri able and, some standards (criteria) by which the auditor can evaluate the information. Moreover Karla M. Johnstone et al.(2014), said a financial statement audit is a systematic process of objectively obtaining and evaluating evidence regarding assertions about economicactions and events to ascertain the degree of correspondence between those assertions and established criteria; and communicating theresults to interested users. (Johnstone, Gramling, & Rittenberg, 2014).

2.2. Agency Theory

The financial statements are information products produced by the management of an entity, requiring the opinion of the legality of a professional and independent person, to provide an assessment of the financial statements before the financial statements are used as material in decision-making, by concerning parties. Management is responsible for carrying out the operational activities of the entity, acting as the agent holding the trust and command of a resource owners group acting as principal. The Principal does not entirely trust the agent, since there is an opinion that the agent may act based on his best personal interests in order tomaximize his own profit, if there is an opportunity to do so. This principal opinion is supported by the fact that there is an asymmetric information between agent and principal. Agents involved in day-to-day operations master the details of the entity's information rather than the principal himself. Principal is notsure yet that the agent will act honestly to represent his interests. Therefore, to represent the interests of such parties, a third party who is able to act professional and execute an independent action is required to perform anassessment of the management's performance (agent). Under these circumstances, audit services are required. (Jensen & Meckling, 1976).

Nicole J. Saam (2007) says that the concern of agency theory is the welfare of the principal which may not be optimal because there are differences in goals and risk preferences between principals and agents. Agency theory makes implicit assumptions about the power relationship between principals and agents. Agency problem analysis reveals that in all situations where there is an agency problem, theprincipal quantitatively has a larger power base than the agent. Agency theory

implicitly assumes a power asymmetry in favor of the principal. In certain situations and conditions where the principal wants certainty that the agent has acted in accordance with his interests, a third party is needed who is able to become anindependent party to monitor the agent's performance. In this condition, the Auditor is required as a third party. Auditors must act to audit management (agent) assertions in published financial statements. (Saam, 2007).

2.3. Audit Quality

A Francis research examines the framework for understanding audit quality. Francis' framework has six dimensions which affect audit quality: (1) Audit inputs, (2) Audit Process, (3) Accounting firms, (4) Audit Industry and audit markets, (5) Institutions, and (6) Economic consequences of audit outcomes (Francis, 2011). Sawan & Alsaqqa (2012) in their research put forward the dimensions of audit quality: (1).Report the real financial situation of the clients; (2).More risk averse in respect of damage to their reputation from public scandals and/or audit failures; (3).Perform more powerful, effective tests and are more credible; (4).Plan the audit process more effectively; (5).More independent and more likely to issue qualified reports. In relationto the impact of different sizes of audit firms on audit quality, a clear majority of oil companies and audit firms agreed that big four firms are superior to their non-big four counterparts in all of the reputation issues, so the size of theaudit firm is positively associated with audit quality. (Sawan & Alsaqqa, 2012).

IFAC through one of its agencies, the International Audit and Assurance Standard Board (IAASB) in 2013, state as follows: (IAASB, 2013) A Quality audit is likely to be achieved when the auditor's opinion on the financial statements can be relied upon as it was based on sufficient appropriate audit evidence obtained by an engagement team that (1)Exhibited appropriate values, ethics and attitudes; (2) Was sufficiently knowledgeable and experienced and had sufficient time allocated to perform the audit work; (3) Applieda rigorous audit process and audit qualitycontrol procedures; (4) Provided valuable and timely reports; and (5) Interacted appropriately with a variety of different stakeholders. PCAOB (PCAOB, 2013) define audit quality as meeting investors' needs for independent and reliable audits and robustaudit committee communications on: (1) Financial statements, including related disclosures; (2) Assurance about internal control; and (3) Going concern warnings. The PCAOB framework also incorporates elements of external pressure, such as rapid environmental changes and pressures for growthand profits, that affect audit quality. It also describes the desired quality process and audit outcome at multiple levels, which involves the team involved in the firm's engagement.

From the previous description, it can be concluded that in relation to audit quality; audit activities should be conducted by competent persons possessing adequate, independent and ethical knowledge. Furthermore, it should be also carried out in accordance with generallyaccepted auditing standards to provide reasonable assurance that the financial statements have been audited and the disclosure has been presented accordingly by management along with the general accepted accounting principles and, there is no material misrepresentation caused by mistake or fraud.

2.4. Accounting Firm Size

A researcher DeAngelo (DeAngelo, 1981) examined the framework for understanding audit quality, encapsulates the dimensions of audit quality as "the market-assessed joint probability that a given auditor will both (a) discover a breach in the client's accounting system, and (b) report the breach". This definition contains two aspects of audit quality:

(1) the competence of the auditor for detecting misstatements and (2) the independence of the auditor for reporting such misstatements. Although this is the most cited definition of audit quality, the problem is that audit quality according to this definition cannot be observed let alone measured. The description of DeAngelo's research (1981) states that theopinion of the regulator and local audit firm which states that audit firm size does not affect audit quality so it should not be relevant in the selection of auditors, contradicts his view. DeAngelo argues that audit quality is inseparable from audit firm size. The big audit firm provides more assurance of quality audit results compared to small accounting firms.

Research by Lennox (Lennox, 1999)investigates the effect of non-audit services on audit quality. His research evidence shows a weak positive relationship between non-audit services and audit qualifications. This shows that the provision of non-audit services in accounting firms does not

reduce audit quality.

According to Yu, the Sarbanes-Oxley Act of 2002, and the death of Arthur Andersen have caused the Big Four to reevaluate their procedures to ensure that the quality of their audit work is of a high and consistent standard. The audit quality of the Big Four auditors can be expected to improve after the Sarbanes- Oxley rule, for at least two reasons. First, PCAOB inspections have helped identify andaddress a wide range of accounting and auditingissues. Second, there is evidence to suggest that the big-four are taking proactive steps of their own, to improve audit quality. The big-four has placed its main attention on risk management at the highest level. The results of research from Yu state that there is an effect of the size of the accounting firm on audit quality. Large accounting firms provide systematically higher audit quality. Large accounting firms have a strong incentive to achieve uniform quality across their offices in the post-SOX era.(Yu,2007).

Ali Mansouri et.al (2009), stated that from the bankruptcy of Enron on December 2, 2001, over the next 12 months, unprecedented bankruptcy and corporate scandals emerged. Six of the top ten companies went bankrupt in a 12 month period. Of these six companies, all received modified opinions, with four of the six companies (WorldCom, Enron, Global Crossing, and UAL Corp.) being Arthur Andersen's clients. Because external auditors play an important role in society, users of financial statements must believe that external auditors are free from the control of other parties. Independent auditors provide investor confidence in the audited financial statements. Threats to auditor independence can undermine this belief. The research findings of Ali Mansouri et.al (2009) stated that the specialization of the IACPA is very influential on fraud detection, besides that the competence of IACPA members is influential in detecting fraud. (Mansouri, Pirayesh, & Salehi, 2009).

Research by Jong Hag, et.al. (Jong Hag, Kim, Kim, & Zang, 2010), taking the research theme on Audit Office Size, Audit Quality, and Audit Pricing. They investigated whether accounting firm size, in particular, is a significant determinant of audit quality and audit fees at the national level. For empirical testing, audit quality is measured by unsigned abnormal accruals, office size is measured intwo different ways: first, based on the numberof audit clients per office. Second, based on the total audit fee received by each office. The results of his research stated that office size had a significant positive relationship with audit quality and audit fees. This positive relationship supports the view that large accounting firms provide higher quality audits than smaller firms,and that such quality differences are valued in the market for audit services.

Moreover, the research conducted by Al Thuneibat et al. (Al Thuneibat, Ibrahim Al Issa, & Ata Baker, 2011) shows that the long-term relationship between accounting firms and their clients does not improve the audit quality of accounting firms in Jordan. The longer the relationship between the accounting firm and its clients, the lower the audit quality, regardless of the size of the accounting firm. The audit market in Jordan is dominated by large accounting firms. As indicated earlier in the statistical sample, the majority of public companies (89 percent) are audited by large accounting firms. The effect of accounting firm size on audit quality is not significant.

Jackie Weiner (2012), examines the size of the accounting firm and audit quality. Respondents included in the research sample had experienced cases of audit failure with indications of restated financial statements which were then litigated. According to him, theexistence of litigation is not a good measure to determine audit quality. Previous studies found that companies that have a fair opinion without the possibility will switch auditors, than those that receive an opinion without the possibility. Faced with the decision to switch auditors, mostof the respondents in this study sample chose "branded auditors" or well-known auditors (the big four). Wenner's research results reveal that the reputation of the big four auditors signifies and creates more value for the company in the eyes of shareholders. (Weiner, 2012).

Domenico Campa (2013) was inspired by concerns raised by the British House of Lords that the oligopolistic structure of the UK audit market may have led to “excessive” fees foraudit services. (House of Lords, 2010c). This study aims to conduct an empirical investigation whether the existence of a “premium audit fee” from the big four is related to audit quality.Campa reveals that the big four charge clients a "premium audit fee". He further argues that financial markets do not benefit from the use of the big-four, financial statement disclosures do not become more informative than those reported by the non-big four. then the intervention of the House of Lords is necessary. This intervention may be very urgent, because the high audit fees are not accompanied by an increase

in the quality of the services provided. (Campa, 2013). Subsequent research by AlKhaddash et al. (AlKhaddash, Zarqa, Al Nawas, & Ramadan, 2013) states that there is a positive and significant relationship between audit quality and audit efficiency, audit office reputation, audit fees, audit office size, and auditor proficiency. The results of this study contribute to the existing literature in the area offactors influencing audit quality in a developing country such as Jordan. Auditors who maintaina higher level of specialization in auditing through participation in specialized seminars and training will increase the auditor's experience in their field and increase their qualifications, as meeting with people who specialize in auditing will be beneficial and have a positive impact on their proficiency.

Research by Vaicekauskas (2014) examinesthe quality of audit services offered by international and local accounting firms. According to him, in recent years there have been many efforts to improve audit quality, along with the increasing audit scandals around the world. To improve audit quality, it is important to ensure that all stakeholders will be satisfied with the results presented and with the audit process carried out. Attention is not only directed to external users (third parties) but also to the client's perception of a quality audit being carried out. So, very subjective. The aim of the study was to investigate whether audit clients in Lithuania perceive better quality in audit services when they use a local accounting firmor an international accounting firm. The survey results imply that both international and local accounting firms have provided the same levelof value added and audit performance to their clients. Even audit clients in Lithuania consider audits provided by local accounting firms to be of higher quality than international accounting firms in terms of their insight into tax risks, partner involvement in audits and, perceived competence of audit assistants (Vaicekauskas,2014). (Vaicekauskas, 2014). Halim et al. (Halim, T, Rosidi, & Achsin, 2014) stated that high audit quality indicates that the auditor can detect financial statements that contain material misstatements, thereby reducing informationasymmetry between principals and agents, and ensuring the interests of stakeholders.

The results of research from Majid et al. (Majid, Davodi, & Mansoorkhani, 2015), state that accounting knowledge and skills as well as information technology audit quality have a positive impact on audit quality.

3. RESEARCH METHOD

3.1. Case Study

The research methodology used in this research is qualitative case study method. This qualitative research will employ a field research to analyze data and facts and phenomena over a period of time with secondary data support and writer's knowledge / insight. The goal is to provide context and process analyzes that illuminate the theoretical issues being studied. Case studies are perfect for answering research questions that require a detailed understanding of social and organizational processes, as rich data is collected within the context of research questions. (Yin, 2003). The type of data collection in case study are: (Shauki, 2016) (1) Participant Observation; (2) Direct Observation;
(3) Ethnography; (4) Interview; (5) Focus Group; (6) Documentary Analysis; (7)Questionnaires.

3.2. Data and Sample

The population is a generalization area consisting of research objects that have certain characteristics set by researchers (Sugiyono, 2010). In this study, the object under study is the audit quality of Certified Public Accountant (CPA). CPA within the accounting firm as aunit analysis. In qualitative research, data can beobtained from various sources. The more data and information collected, the easier data processing will be. It will be used to produce information and answer research questions. Data can be used to get an idea of the actual state and solve a problem that is being investigated. (Moleong, 2010).
The main data sources are words and actions that can be obtained through direct interviews with informants. The informantsinvolved in this research are:

Table 1 Main Data Sources

No	Main data source (informants)	Person	Location	Identity

	Head of East Java IAPI Branch and Accounting Firm Practitioner	2	Surabaya	A & B
2	Senior Partner in Local Accounting firm, Medium Size	1	Surabaya	C
3	Senior Partner in Local Accounting firm, Medium Size	1	Jakarta	D
4	Partner at The Big Four Accounting firm	2	Surabaya	E & F
5	University Lecturer, Practioners, members of The Central Executive Board of the IAPI Organization	2	Jakarta and Malang	G & H

3.3. Validity and Realibility

Validity in qualitative research is an evaluation in seeing the suitability of research conclusions with evidence of existing data. Validity in qualitative research is related to accuracy in research procedures so that research results and research conclusions can be trusted. (Budiastuti & Bandur, 2018). There are two types of validity in qualitative research, namely, credibility test (internal validity) and transferability test (external validity) (Sugiyono, 2014). In this study, internal validity was used by means of source triangulation.

Qualitative research is said to be reliable when the results of the research can be applied by other researchers in other qualitative research, so that research is reliable it is necessary to document in the field, either with a log book or other notes related to the field (Budiastuti & Bandur, 2018).

3.4. Triangulation

In this research, the data checking technique to maintain the validity of collected data is triangulation. According to Bandur (Bandur, 2014) “Triangulation is a technique of examining the validity of data that utilizes something other beyond the data for checking purposes or as a comparison against the data". Furthermore, Morse (1978) cited by Shauki, (2016) outlines two types of triangulation methodologies; (1) Simultaneous triangulation, (2) Sequential triangulation.

In this research, the type of triangulation methodology chosen is simultaneous triangulation, which is a simultaneous use of qualitative and quantitative methods, since there is limited interaction between the two data sources during the data collection phase.

Data triangulation has a dominant status which is obtained simultaneously (Concurrent / Simultaneous). quantitative data is only complementary to qualitative data. Therefore, the result of data processing and interpretation of data presented are qualitative data only. The Time Sequence Decision of the Audit Quality Model is presented in figure 1

Concurrent

Paradigm Emphasis Decision	Dominant Status	QUAL + qual

Figure 1. The Time Order Decision of Audit QualityModel

Data collection techniques are carried out in three ways, namely: 1.) Through a series of field observations, namely observations; 2.) Further interviews by visiting informants face to face and collectively through focus group discussions; and 3.) Document collection. Documents related to

research are then analyzed using QDA miner lite.

QDA Miner stores all documents, coding schematics, code, and records in a set of files called "projects". QDA Miner projects consist of several cases. Case is the basic unit of project analysis. These usually represent individuals, organizations, or groups. Cases can contain multiple documents as well as various alphanumeric, numeric, categorical, or Boolean variables. This variable is used to determine the properties associated with the case. Transcripts of interviews obtained from informants were analyzed with QDA Miner

4. RESULT AND DISCUSSION

4.1. The History of Accounting Standard in Indonesia

Initially, Indonesia adopted the Dutch accounting standard called "Sound Business Practices". In 1974, IAI (The Indonesian Institute of Accountants) followed the US GAAP accounting standards set forth in the Indonesian Accounting Principles (PAI). The PAI published in 1974 with 101 pages. Ten years later, in 1984, the PAI was revised and thenumber of pages increased to 318 pages. Some of the arrangements contained in the 1984 PAI are in addition to regulating the principles of assets, liabilities, and capital, as well as regulating industry-specific standards such as loss insurance accounting, oil and gas accounting, and accounting for cooperatives. PAI 1984 also has nine interpretations.

At the IAI VII Congress, it was first launched SAK (Financial Accounting Standards) in 1994. SAK 1994 contains 35 statements of financial accounting standards, in addition to the basic framework for the preparation and presentation of financial statements. The main reference used as a reference source in SAK 1994 is from the International Accounting Standard (IAS). US GAAP is no longer used as the primary reference but is only used as a compliment, if the SAK requires a standard, but is not governedby the IAS.

In subsequent developments in the International IAS world then became IFRS.

The important events occurred in 2002 when the FASB and IASB began the partnership to improve and convert US GAAP and IFRS. These events had an effect on the development of IFRSs in Indonesia. The G20 meeting on April 2, 2009, in London (London Summit), resulted in 29 agreements. In agreement no. 13- 16 mentioning the regulation of Strengthening Financial Supervision and Regulation. (Mustofa, 2014).

In line with the development of accounting standards in the world, the Statement of Financial Accounting Standards (PSAK) issued by the IAI Financial Accounting Standards Board, adapted to IFRS. Gradually Financial Accounting Standard in Indonesia (PSAK) which still refers to US GAAP and not in lineyet with IFRS-IAS then adjusted. IFRS Convergence is one of the Indonesian government's agreements as one of the members of the G20 forum. Therefore, since 2012, financial accounting standards in Indonesia haveadopted IFRS. (IAI, 2015).

4.2. The History of Auditing Standard in Indonesia

In 1973 the Indonesian Institute of Accountants (IAI) established The Norm of auditing an Accountant Committee. The committee was given the task of draftingauditing standards on historical financial statements. The Committee produces a standard named The Norm of auditing an Accountant (NPA). In line with the development of the business needs of public accountant services, in mid-1994 in IAI board meeting 2 important decisions were made:

1. Change the name of the Norm of auditing an Accountant Committee to the Board of Professional Public Accounting Standards (DSPAP);
2. Change of standard name resulting from The Norm of auditing an Accountant to Professional Standard of Certified Public Accountant.

This change is intended for the public accountant profession to be able to follow the changing needs of the service user community and respond quickly through the established organization. The NPA's standard name change to SPAP is intended to indicate a significantincrease in the quality of audit services and the extension of services outside the audit services for the Public Accounting Firm, which may be provided by the public accounting profession in Indonesia. (Mustofa, 2014).

Those that happened in Indonesia are also in line with the development of the international world. The IAASB (International Auditing and Assurance Standards Board) was established in March 1978, formerly known as the International Auditing Practices Committee (IAPC). The standards issued by the IAPC focuson; (1) Object and scope of financial statements,

(2) Letter of Engagement, (3) General Audit Guide. In 1991, the IAPC standard was decodedinto the International Standards on Auditing (ISA).

The history of the standard auditing journeyin Indonesia also follows the organization's history of public accounting, starting from IAI, IAI Public Accountant Section, IAI Compartment of Public Accountant to IAPI. Therefore, the adoption of ISAs as the standard used in assurance services in Indonesia is one ofthe implementations of G20 commitments and responds to the recommendation of the World Bank, as well as the mandate of the Public Accountants Act 2011. The IAPI after becomingan official IFAC member has adopted ISAs for use in auditing financial statements for periods beginning on or after 1 January 2013.

4.3. The Current Conditions of CPAs andAccounting Firms in Indonesia

At this time when the MEA (Economic Community of ASEAN) has been running since 2015, the condition of a public accountant (AP) and public accounting firm in Indonesia compared with other countries in the ASEAN region is still not encouraging, both in terms of quantity, and In terms of quality too. Data contained in the IAI until 2013 the number of professional accountants who have registered as an IAI member numbered 15,940 accountants. While the number of professional accountants in Malaysia (30,236 accountants), in the Philippines (19,573 accountants), Singapore (27,394 accountants), and Thailand (56,573 accountants). For the number of public accountants, the data reported by IAPI until 2013. The number of CPAs in Indonesia is atthe bottom of the six countries in the ASEAN region. Of the 998 CPAs in Indonesia, 55% are located in Jakarta and surrounding areas, theremaining 45% spread throughout Indonesia. It can be imagined, how uneven distribution of thenumber of CPAs in the territory of Indonesia is so wide.

While the data in 2016 (as of April 25, 2016) for the development of the public accounting profession in Indonesia issued by thePPPK (Financial Professional Development Center) Ministry of Finance of the Republic of Indonesia (Pusat Pembinaan Profesi Keuangan, 2016) released the number of CPAs in Indonesia, spread unevenly in Indonesia and tend to gather in big city areas (especially Jakarta, Banten and West Java). 29% are elderlyand ahead of retirement. The growth of new public accountants in Indonesia is not so fast, uncomparable with the number of accounting courses in universities in Indonesia.

4.4. Finding

Various opinions and references related to the definition and dimensions of accounting firm size were collected from various sources, both primary and secondary sources, namely as follows: (1) The size of accounting firms in Indonesia follows the historical development of international accounting firms that occurred due to the merger process involving asset capitalization, global turnover, network, and market share; (2) The criteria used to include Indonesian accounting firms into the large group of accounting firms are influenced by international conditions. The second group which was later referred to as the second-tier accounting firm, namely global accounting firms other than the big four; (3) Those that are not included in groups one and two are categorized as local accounting firms. This general criterion of the size of the accounting firm is also used by Government authorities in Indonesia and by professional organizations of public accounting in Indonesia.

The opinions from several sources about audit quality are shown in text retrievals processed with QDA Miner 5. Some important notes on audit quality are as follows: (1) In general, Audit Quality is defined as the probability of market appraisal on the auditor's work (DeAngelo, 1981), which is related to the knowledge that auditors with technical skills will be able to detect errors and irregularities, and report them independently in their audit engagements accordingly with professional ethics. In accordance with ethical values andethical attitudes of auditors, disclosure of fault detection and irregularities will directly affect the Quality of Audit (IAASB, 2013).; (2) CPA in Indonesia translate and apply quality audits based on guidance from IAPI (The Indonesian Institute of Certified Public Accountants). The IAPI stipulates that the Audit Quality indicator comprises: auditor competence, ethics, and auditor independence, time usage key engagement personnel, quality control system, external and internal review outcomes, range of engagement controls, organization and governance, and service rewards policies. (IAPI, 2016).; (3) IAPI is a member of IFAC. Audit quality is contained in the auditing standardsissued by IAPI, adopted from

the ISA. Currently, the implementation of audit qualityas per auditing standards has been made its guidance by IAPI in order to facilitate its implementation. Implementation of audit quality in accordance with the guidelines and quality audit indicators developed by IAPI must be implemented in 2017, by CPA in Indonesia; (4) The Audit Quality Transparency Report required by IAPI beginning in 2017 mirrors the implementation of audit quality in the work environment of public accounting firms practicing in Indonesia.

1. Audit Company Size and Audit Quality

The results of interviews with several informants from public accounting practitioners regarding the classification of public accounting firms based on their size and implications for audit quality stated as follows:

Informant A:

"There is no official standard of measure set by the authorities, the size is only seen from the amount of turnover reported in Indonesia and in the world because of the large network of accounting firms around the world. Under these conditions, large accounting firms have more resources than local accounting firms, so they tend to be of higher quality".

Informant B:

"There are at least 3 public accounting firms, namely The Big Four which due to their history and turnover became their own group after Anderson closed, then foreign affiliated accounting firms, and local public accounting firms. In terms of quality, the Big four KAPs are definitely better because of their experience and technical support".

Informant C:

"Indeed, there is a classification as an unwritten agreement, where the big four are placed in one cluster, then there are local accounting firms that become foreign partners and there are local accounting firms. But that's actually an image, there's no guarantee that the big four accounting firms are of higher quality than the local ones".

Informant D:

"I am not sure how the classification of accounting firms is done in Indonesia. As far as I know there are the big four and non-the big four. In terms of audit quality, I think they are all the same because they use the same auditing standards".

Informant E:

"I have worked in a local accounting firm as well as an accounting firm other than the big four, I can compare that the big four is better in every way compared to the local accounting firm".

Informant F:

"I have experience doing reviews at local accounting firms as well as other foreign affiliated accounting firms besides the big four, when we replaced the accounting firm as auditor. In my personal opinion, the quality of the completeness of the working papers is very far from us".

Informant G:

"Broadly speaking, the classification of accounting firms consists of the big four, foreign affiliated accounting firms, and local accounting firms. In terms of quality, there has never been an opportunity at the local accounting firm as a result, there is a significant difference. Regulators in Indonesia should imitate China, where foreign companies located in China must be audited by local accounting firms and not the big four or foreign affiliates. thus the audit quality of local accountants can be encouraged to rise to the level of the big four".

Informant H:

"The size of the accounting firm is not always synonymous with audit quality, because it depends on the experience and competence of partners and auditors".

From the results above, CPAs in Indonesia tend to assume that the big accounting firms, the big four, have more advantages than local accounting firms in all respects, especially in terms of human resources, competence, experience, information technology, and global networks, thus enabling exchange of experts. to solve the case. determined in the audit. Therefore, the size of the accounting firm tends to affect audit quality.

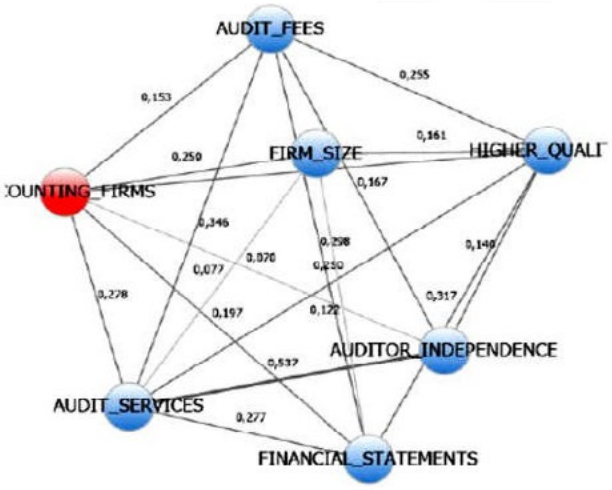
The discussion of the variable size of the accounting firm in Indonesia raises a new thought that there are other variables that affect the quality of the accounting firm, such as the existence of regulatory policies related to audit obligations. Referring to the experience in China, China's regulatory policy requires companies in China to be audited by local audit firms, thereby increasing the experience and competence of local audit firms. For companies registered on the capital market outside China, they can be audited by an international accounting firm other than a local accounting firm. With this policy, the bargaining position of domestic and foreign accounting firms is relatively equal. This can improve the quality of local accounting firms in the future.

Using QDA Miner 5 shows the results of audit firm size have a fairly strong relationship with quality higher than 0.161 as shown in table 1, and figure 2. This shows that large accounting firms tend to have better quality than small accounting firms. This is in line with references to previous research by (DeAngelo, 1981), (Al Thuneibat, Ibrahim Al Issa, & Ata Baker, 2011), (Campa, 2013), (Jong Hag, Kim, Kim, & Zang, 2010), (Sawan & Alsaqqa, 2012),(Weiner, 2012), (Yu, May 2007).

Tabel 1. Data Tabulation by QDA

	Acc Firm	Audit fees	Firm Size	Higher Quality	Audit Service	Auditor Independence	Financial Statements
Acc Firm	-	0,513	0,250	0,340	0,278	0,070	0,197
Audit fees	0,513	-	-	0,255	0,346	0,167	0,298
Firm Size	0,250	-	-	0,161	0,070	-	0,250
Higher Quality	0,340	0,255	0,161	-	0,250	0,140	0,317
Audit Service	0,278	0,346	0,070	0,250	-	0,537	0,277
Auditor Independence	0,070	0,167	-	0,140	0,537	-	-
Financial Statements	0,197	0,298	0,250	0,317	0,277	-	-

Source: Reseach Result (2020)



Source: Reseach Result (2020)

Figure 2. Link Analysis Model

The convergence of IFRS to PSAK and ISA to SPAP (Standard Professional Accountants) has an impact on increasing the routine costs of the Indonesian Institute of Accountants (IAI) and the Indonesian Institute of Certified Public Accountants (IAPI). An agreement to provide data for public

publication and translation was signed between the IFRS Foundation, IAI, and IAPI in 2013. The agreement covers the IFRS Foundation's translation, adoption, and copyright policies. Both IAI and IAPI must pay an advance of £10,000 per year and a royalty of 20% of the gross selling price of the printed PSAK (Financial Accounting Standards) and Auditing Standards books. (Mustofa, 2014). These costs are ultimately borne by IAI and IAPI members, with various types of mandatory fees imposed on CPAs and accounting firms in Indonesia. Ironically, the audit market segment in Indonesia tends to remain stable, which has implications for the liquidity of local accounting firms in Indonesia. Instead of providing competency enhancements to improve audit quality, this levy will reduce the economic capacity of small accounting firms to invest in improving their human resources, and improve information technology for audits, which will have an impact on the quality of local accounting firms.

The results of the interviews obtained related to the problem of routine organizational expenses borne by the accounting firm, several informants from the local accounting firm stated as follows:

Informant A:

"The organizational burden that we have to bear is very large, you can imagine the regular annual fee to IAPI is IDR 3,000,000.00, for mandatory PPL (professional education) activities if we have to reserve 40 SKP at least IDR 6 million not including dues to OJK (Financial Services Authority), fees for quality reviews, and so on. This weighs on us".

Informant B:

"This business has become unattractive, too many dues and fees are charged to us accountants, while the audit market is controlled by certain accounting firms".

Informant C:

"We find it difficult to develop our office and human resources because of the large fees, the audit market is difficult to obtain, while for other services, such as tax services, we also have to compete with tax consultants".

Informant G:

"I, who is also involved in education, feel that it is difficult for an accountant office business in Indonesia today compared to 10 years ago, there are many fees and regulations, the difficulty of obtaining a CPA certificate in Indonesia, and the high initial investment cost to take the CPA exam, making students I am very little interested in working as a public accountant in Indonesia". With the above conditions, another worrying impact is the declining interest of the younger generation in Indonesia to enter the professional world of accounting firms, as CPAs. Due to several empirical facts related to CPA in Indonesia, namely: (a) The cost of accounting studies in Indonesia is relatively expensive and takes a long time; (b) CPA certification is expensive and difficult to achieve; (c) Inadequate salary when working ata local accounting firm, because the accounting firm is already burdened with routine overheads from professional organizations and regulators so that local accounting firms cannot provideadequate salaries, and develop the potential capabilities and competencies of their auditors;

(d) There are too many regulations in Indonesia that are subject to change at any time, which tend to be considered 'favorable' to the big four;

(e) Many mandatory fees must be paid when a CPA has a certificate and will work in an accounting firm. With this condition, it is not impossible that Indonesia will experience "The lost of a generation", because the younger generation is increasingly disinterested in this profession. If this happens, foreign accounting firms will survive in Indonesia.

5. CONCLUSIONS AND SUGGESTIONS

This study concludes that audit quality is related to the size of audit firm. Audit quality is influenced by competence. Competencies are obtained from education and training, work experience in the field, involvement in discussions and FDD, knowledge transfer & work supervision. With time and experience, one can gain competence. Indicators of audit quality at the audit firm level consist of auditor competence, ethics, and auditor independence, the use of time from key Engagement Personnel, quality control systems, results of external and internal reviews, engagement control spans, organization and governance, and service fee policies (IAPI, 2003). 2016).

An important finding of this study is that laws and regulations regarding the practice of CPAs and Accounting Firms in Indonesia are considered more favorable for large international affiliated

accounting firms, which already have a competitive advantage over local accounting firms. A number of obligations that must be paid by CPAs and local accounting firms become obstacles that are difficult to overcome due to limited work and finances. There is potential, accounting graduates in Indonesia are not interested in becoming a CPA and working in an accounting firm because the cost to get a CPA certification is expensive and difficult to achieve, the annual fee for a CPA is expensive, but the salary is low. Under these conditions, the size of the accounting firm has an influence on audit quality. The big four accounting firms have better audit quality than non-the big four accounting firms because of their competitive advantage. These results strengthen the findings of DeAngelo (1981), Jong Hag, et.al. (2010), Jackie Weiner (2012), AlKhaddas et., al (2013).

From the results of this study, organizations and regulators in Indonesia should review the policies that have been implemented at this time to be able to provide opportunities for local public accountants to work in their own country, and provide proportional convenience and cost reductions for the younger generation to be interested in working as public accountants which does not pose a barrier to entry.

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A Study on Consumer Preference Towards Braga Art Café in Bandung City

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Abstract

Seeing the lifestyle of today's teenagers has a positive impact on café business opportunities in Indonesia, especially in the city of Bandung. The café is considered a comfortable atmosphere concept as if you were in a second home. With a comfortable concept, buyers feel more productive and easier to find inspiration when hanging out at the café. Lifestyle affects changing generations where today's teenagers prefer practical things and spend time outside the home to gather with family, friends, and colleagues in a café or restaurant with a unique atmosphere. Which provides delicious food & drinks at relatively affordable prices, has stable internet speed facilities for consumers to do assignments, play games, or hang out with friends. Café businesses that prioritize innovations in their products/services are also urgently needed at this time. Given the global 2020 COVID-19 outbreak, café owners can design creations to keep their business competitive with other cafes and meet consumers' needs. This study uses Conjoint Analysis to understand consumer wants/preferences for a product/service. The data collection method used uses a purposive sampling technique as many as 385 respondents have visited Braga Art Café Bandung. The distribution of the questionnaires was conducted online through social media. These study results are stimuli six that consumers prefer the most by Braga Art Café, which has a good interior for store atmosphere attribute, an affordable price for price attribute, innovation of technology for innovation attribute, and fast internet access for facility attribute.

Keywords: Conjoint analysis, consumer behavior, food and beverage, lifestyle, store atmosphere

JEL Classification: [M310]

Introduction

West Java is one of the provinces in Indonesia that has an attraction in terms of culinary. This is supported by selecting Bandung as the capital of West Java province as the 6th World's Best Cities for Traditional Foods by the TasteAtlas Website in February 2021 (TasteAtlas, 2021). The city of Bandung has a variety of places to eat, such as restaurants and cafes, and has become a pioneer of Indonesian culinary. Many creative and innovative millennials have started to penetrate the food and beverage business and carry out promotions in marketing ways that were never thought of (Mulana, 2019). The pleasant atmosphere, fantastic scenery, great taste, and unique concepts and ideas became the main attraction of restaurants and cafes located in Bandung.

The pandemic in 2020 has changed the habits of people living at home and working from home. It also changes people's habits to enjoy the food and drinks of restaurants or cafes. Due to large-scale social restrictions, cafes are no longer visited as meeting places or work sites. In the period 2016 to 2019, the growth of the food and beverage industry in Bandung reached an average of 20%. Unfortunately, the food and beverage sector were affected by a tremendous impact, with a down to half of it (BPS Kota Bandung, 2021). Pandemics also strongly impact the national economy, which grows -2.07% in 2020 (BPS RI, 2021).

One of the culinary centers in Bandung is on Jalan Braga, which has various places to eat and cafes. But during the enactment of restrictions on community activities, the location of culinary centers becomes more convenient because government regulations limit capacity. This condition becomes a challenge for restaurants and cafes to survive dan compete. There are three main cafes on Jalan Braga

with the same atmospheric characteristics: Braga Art Cafe, Myloc Cofee & Cafe, and Indische Cafe Braga. Based on Google's review, the three cafes have a competitive rating (4.6), but Braga Art Cafe has a lower rating (4.5).

Café owners need to attract customers to visit and buy their products amid various restrictions. Kotler and Keller (2016) state that store atmosphere, price, facilities, and innovation influence consumer preferences. The store atmosphere is one of the essential things to attract consumers to come and enjoy the products sold in the café (Mannan et al., (2019:924). Price is something that significantly affects consumers in buying a product. In terms of price, the café business must provide competitive prices with other cafes, one of which can provide low prices with better product quality. At Braga Art Café, the price offered is affordable for quite a lot of food or drink portions. Customers can get live music on certain days and a reasonably fast internet network, making customers like to spend time in the café hanging out or doing assignments.

Café owner prioritizes comfort in enjoying a food or beverage menu. Therefore, a place for a café business needs to have an attractive and impressive appearance. Likewise, the menu selection, place decoration, and entertainment facilities are also important so the café business can run and develop well (Jujang, 2020). This study will identify several factors that influence consumer perception on visiting Braga Art Café at Braga Street, Bandung that customers prefer. The factors/stimuli are Store Atmosphere, Price, Innovation, and Facility. This research is trying to identify which factors from attributes in this study can influence consumer preferences and what changes or improvements are most preferred by consumers for Braga Art Café by using the conjoint analysis method.

Literature Review

Consumer behavior involves the thoughts and feelings they experience and their actions in the consumption process. It also includes anything in the environment that influences those thoughts, feelings, and activities. This includes other consumer comments, pricing ads, packaging, product views, blogs, and more. Consumer behavior that is dynamic and involves interaction and exchange is critical to recognize (Peter & Olson, 2014).

In consumer preference, several indicators can influence a person's preferences in determining a purchase decision by understanding the attributes, level, and stimuli. In definition, the level is a special non-metric value that describes a factor that must have two or more levels, but usually, the level does not exceed four or five levels as proposed by Hair et al. (2014). Meanwhile, according to Santoso (2018), the definition of stimuli is a combination of variables/attributes with levels. From the result of Fauzan (2018), Razak et al. (2019), Saefudin et al. (2020), and Dewita (2020) 's study, the researcher can identify that several stimuli have the most substantial connection with the preferences of consumers, which are: Store Atmosphere, Price, Innovation, and Facility.

According to Akram et al. (2016), store atmosphere is a complex combination of psychological attributes and tangible and intangible or functional qualities. They dealt with the perception of store atmospherics, the interface of the tangible and intangible elements created by customers' feelings and thoughts within the choice of their previous knowledge, experience, and expectations. Store atmosphere contributes to the customer shopping convenience and therefore influences the shopping experience. Store atmosphere elements can be divided into four main elements: exterior, general interior, store layout, and interior displays (Rijal & Suyanto, 2016). In this study, the levels of this attribute are good exterior and good interior, which is where the interior and exterior of a place can influence a customer to visit.

Price is the amount of money charged for a product or a service. More broadly, price is the sum of all the values that customers give up to benefit from having or using a product or service. Historically, the price has been the major factor affecting buyer choice. Kotler & Armstrong (2018). Cheap, affordable, and expensive are the levels of this attribute in this research. The determination in choosing the price level as mentioned is to find out what kind of price variant matches the product or service provided by Braga Art Café.

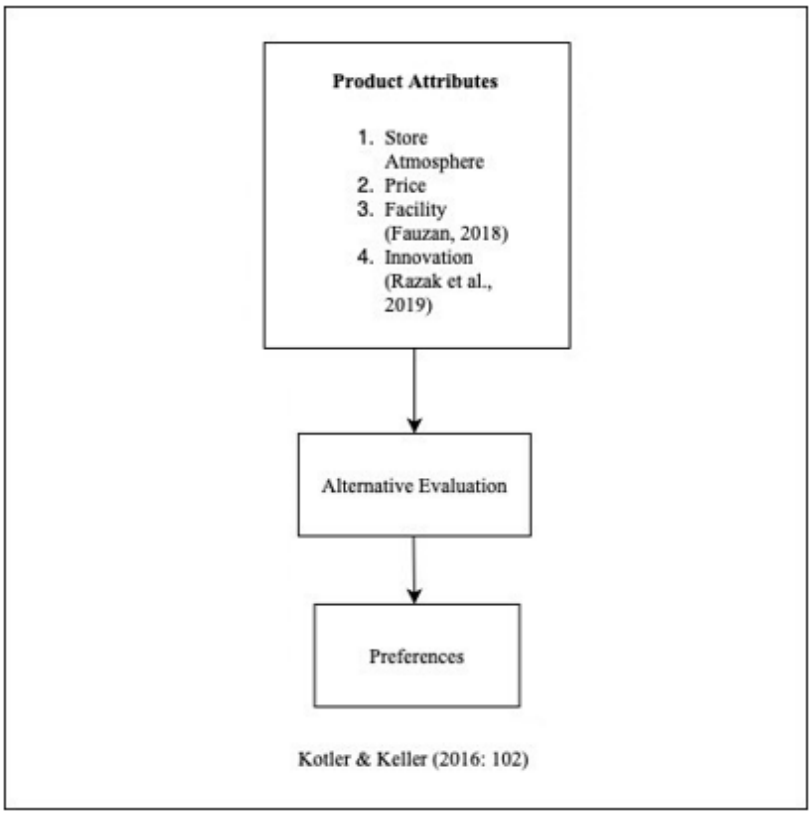
Trott (2017) stated that innovation can be defined precisely as the management of all the activities involved in the process of idea generation, technology development, manufacturing, and marketing of a new (or improved) product or manufacturing process, or equipment. According to Razak et al. (2019), innovation for consumer preference uses customer demand, experience, and suggestions to practice innovation to bring new services and products.

Facilities are essential objects to increase satisfaction, such as customer convenience and meeting service users' needs and convenience. If the services provided meet the requirements, the customer would be satisfied (Oetama, 2017). In this study, live music and fast internet access are facility attributes. A company that provides a pleasant atmosphere with attractive facility designs will influence customers to visit and make purchases.

Based on the literature review above, the attributes that influence consumers on visiting Braga Art Café are tested to determine what attributes consumers want, according to Shidrawi & Suyanto (2019). There is a relationship between consumer preferences for various desired attributes on a product and purchasing decisions, that is because the alternative evaluation stage carried out by consumers occurs before the purchase activity is carried out. In this study, the attributes referred to are illustrated in the framework below:

This research model refers to Fauzan's (2018) research that tested three variables: store atmosphere, price, and facilities. This research will include variable innovation to strengthen the attributes of this research following the investigation of Razak et al. (2019). The determination in selecting these attributes is obtained from previous discussions between the researcher and the café management. The determination is indeed adjusted to the needs of Braga Art Café itself. At the evaluation stage, the community forms preferences among the available attributes. It can also include an intention to visit the café according to their wishes and choices. The citizens will eventually know the attributes of the Braga Art Café according to people's preferences.

Figure 1. Theoretical Framework



Methods

This study was conducted to determine respondents' preferences for Braga Art Café. The method used by the authors in this study is the quantitative analysis method by conducting survey research. The data gathered from each individual and treating each customer response as an individual data source. This cross-sectional study was carried out in one period, then the data was processed, analyzed, and then conclusions were drawn.

The attributes in this study are store atmosphere, price, facility, innovation, and nine levels of attributes that have previously been discussed with café management. The selection of attributes and levels could meet the needs of Braga Art Café itself by finding out what attributes and levels are most preferred by consumers.

Table 1. Summary of research instruments.

Attributes	Level	Source
Store Atmosphere	Good Exterior	Fauzan (2018)
	Good Interior	
Price	Cheap	Fauzan (2018)
	Affordable	
	Expensive	
Innovation	Product Innovation	Fauzan (2018)
	Technology Innovation	
Facility	Live music	Razak et al. (2019)
	Fast Internet Access	

The Conjoint Analysis

The conjoint analysis technique is defined as a statistical method used to measure the combination of correlations from one variable to another (Yusran and Hermawan, 2017). Meanwhile, according to Dauda & Lee (2016), conjoint analysis is a survey-based multivariate statistical technique specifically used to study how respondents make preferences for products or services. Conjoint analysis can also provide an overview of the composition of people's preferences because of their high degree of realization. Conjoint analysis can make it possible to invest consumers' preferences who have the greatest value for perceived benefits based on product combinations. The combination with the highest value will affect consumers to choose the product they will buy (Indrawati, 2015).

The purpose of conjoint analysis in this study is to determine people's preferences when visiting Braga Art Café Bandung. This research can be useful for business owners to create a café like what the customers want. The conjoint analysis design used in this study is the traditional full-profile conjoint. According to Santoso (2018), the combination of attributes and levels is a single stimulus or treatment. This conjoint research consists of 4 attributes and nine levels. So as a whole, there should be a combination of 2 x 3 x 2 x2 = 24 product concepts (stimuli). With such a large number of varieties, it will be difficult for the community to evaluate.

Table 2. Six Combination Attributes Cards

Attributes	Card Number 1	2	3	4	5	6
Store Atmosphere	Good Exterior	Good Exterior	Good Exterior	Good Interior	Good Interior	Good Interior
Price	Low price	Low price	Affordable price	Low price	Affordable price	Affordable price
Innovation	Frozen foods as product innovation	Food Online Delivery as technology innovation	Food Online Delivery as technology innovation	Frozen foods as product innovation	Frozen foods as product innovation	Food Online Delivery as technology innovation
Facility	Live Music	Live Music	Fast internet access	Fast internet access	Live Music	Fast internet access

Based on the results of manual calculations for a combination of attributes, which, after processing, then produces 24 stimuli like the table above. Regarding the calculation results in finding a minimum of stimuli, six combinations of attributes are taken from 24 stimuli in this study. The six stimuli are chosen based on the SPSS calculation estimates that the results will refer to the development of Braga Art Café in a more positive direction (Table 3)

This research uses conjoint analysis with traditional-full profile presentation techniques. The consumer must give a rating (matric rating) of each existing profile from the profiles provided. Using manual calculation can determine the consumer's preferences from several values and utilities after processing the data. From the measurement results, the Pearson correlation is simple to determine the reliability of each profile and measure the predictive accuracy. As previously explained, this study will use the metric rating technique and use a Likert scale where respondents provide ratings between 1-5 from very disliked to very liked

This study aims to find out the preferences of Braga Art Café. The Mean Importance Score is the average value of the respondent's expectation level for each variable or attribute that can be calculated using the formula proposed by Yusendra (2016). According to Hair et al. (2014), Part-worth is defined as an estimate of the combined conjoint analysis of all preferences or utilities related to each level of the factors used to determine the product. In addition, according to Sumarwan et al. (2017), the range of Part-worth of an attribute is the difference in the utility value (part-worth) of a level with the most significant utility value with a level with the smallest utility value.

After the conjoint analysis was carried out and there were results, the next step was to validate and apply the conjoint analysis results if necessary. The results of conjoint analysis and validation of this research can be developed and used either in groups or individually in determining business strategies for a café. According to Best (2013), Ilafi (2019), The Customer Value Index can be calculated by adding each utility level value in each combination of card profiles. Cards with the highest customer value index values are the card stimuli consumers most favor.

Results

The respondent demographic profile indicated that among 385 respondents, 67.5 percent were Higher education, and 31,5 percent were primary and secondary. In monthly income (rupiah) profile, 33.5 percent of respondents were 2.1 - 3 mil, 32.7 percent were 3,1-4 mil, 19.2 percent were more than 4 mils, 9.4 percent were 1.1 – 2.1 mils, and 5.2 percent were 500.000 – 1 mil. 57.9 percent of respondents visit Braga Art Cafe only once in a few months, 29.4 percent visit at least once a month, 12.5 percent of respondents visit several times a month, and only 0.3 percent of respondents visit it every day.

This study was conducted to determine consumer preferences for Braga Art Café by presenting stimuli containing attributes and a combination of attribute levels. The distribution of this questionnaire used online and offline methods to make it easier to get a more diverse sample and process data with 385 respondents; afterward, the data is processed using SPSS to look for Part-Worth values (utility), importance values, and predictive accuracy.

The Part-Worth Value (Utility) result shows that the utility value or usability of the consumer preferences of each attribute level at Braga Art Café. All attributes involved in the part-worth value testing are nine levels. Still, the expensive level from the price attribute is not included because it is not feasible in the SPSS calculation result. The part-worth value test shows that the highest utility value of good interior level at the store's atmosphere attribute (0.194), followed by an affordable level on the price attribute (0.126), then the level of technological innovation (0.052), and the live music level on the facility attribute (0.009).

Table 4 The Part-worth Value and Importance Value

Attributes / levels	**Utility Estimate**	**Std. Error**	**Importance Values**
Store atmosphere			50.872
Good exterior	-.194	.007	
Good Interior	.194	.007	
Price			33.140
Low price	-.126	.006	
Affordable	.126	.006	
Innovation			13.663
Product innovation	-.052	.007	
Technology innovation	.052	.007	
Facility			2.326
Live music	.009	.006	
Fast internet access	-.009	.006	
(Constant)	3.285		

The Importance Value shows the assessment given by consumers on each attribute at Braga Art Café, where the higher the value, the more critical the attribute and the more considered by consumers when visiting Braga Art Café. As a result, the highest scores on store mood attributes (50,872), followed by price attributes (33,140), then innovation attributes (13,663), and facility attributes (2,326). Pearson's and Kendall's correlation results in a substantial correlation because it was above 0.5, proving a high predictive accuracy or a strong relationship between estimates and actual data. Santoso guides this decision (2017: 288); if the significance level is > 0.05, there is no strong correlation between the estimates and actual variables. If the significance level is <0.05, there is a strong correlation between the estimated actual variables.

Table 5 Scores and Stimuli Levels

Stimuli	Score	Level
1	-0.363	6
2	-0.256	5
3	-0.025	4
4	0.007	3
5	0.277	2
6	0.363	1

The Ideal combination testing results are derived from the sum of each utility level attribute value as a whole based on the combination of stimuli, resulting in a score of each stimuli that can then be identified as the ideal combination based on consumer preferences. Table 4.1 shows each stimulus's scores and levels that contain a combination of attributes and level. The result (Table 5) indicates that stimuli card 6 is the highest (0.363), showing that Braga Art Café visitors consider ideal stimuli based on consumer preferences (table 5).

Tabel 6. Stimuli Card 6

Attribute	Level of Attribute
Store atmosphere	Good interior
Price	Affordable price
Innovation	Food online delivery
Facility	Fast internet access

Discussion

The consumer's most preferred attribute level in the store atmosphere is good interior. This shows that consumers prefer a comfortable and attractive atmosphere in the café. As Damayanti (2019) stated, café and restaurants become a gathering point or a means of relaxing with friends. Several cafés and restaurants can be used or rented to gather with a larger capacity, such as reunions, family gatherings, or office events. Even today, several cafes and restaurants have a broader area that can be used or rented for weddings, birthday parties, or other parties by relying on the unique atmosphere and design of the café and restaurant. Many people like to hang out in cafés because they look for a comfortable place to do assignments or talk with friends, family, and colleagues and look for exciting places to take pictures. As Putri et al. (2014) described, store atmosphere can be more reason for consumers to be interested and choose where they will visit and buy. If responded positively by consumers, the store atmosphere offered by producers will have an excellent opportunity for the place to be seen. At this time, Braga Art Cafe already has a good interior but needs to make improvements to adjust to consumer preferences. Creating a comfortable atmosphere and the impression of a spacious room is the most important thing to be addressed.

Consumers will decide to use the service if the perceived benefits are greater than or equal to what has been spent to get it. Suppose consumers feel the product's benefits are less than the money spent. In that case, consumers will assume that the product is expensive, and consumers will think twice about making repeat purchases, Indrasari (2019: 44). Affordable prices are the level of price attributes that many consumers choose, showing that consumers are willing to pay at an affordable price if the price is under consumer satisfaction with the products and services provided. Braga Art Cafe has a price that relatively follows the market average. The most important thing is the price value compared to the products and services that consumers receive. Thus, Braga Art Cafe urgently needs to provide added value to satisfy consumers.

The attribute of innovation that consumers widely choose is Food Online Delivery. If the sale of food and drinks from Braga Art Café uses Food Online Delivery, it will be conducive for consumers who may miss the food or beverages from Braga Art Café but have no time and may be too lazy to come directly to the place. Li et al. (2020) stated that during the global 2020 COVID-19 outbreak, the advantages of Food Online Delivery were obvious, as it facilitated consumer access to prepared meals and enabled food providers to keep operating. Food Online Delivery requires highly efficient and scalable real-time delivery services. Restaurants can use existing staff for self-delivery, such as waiters

in some small restaurants, or they may use specialized delivery teams specifically employed and trained for the role.

When hanging out in a café, few people look for a place with fast internet access. In terms of facility attributes, many consumers choose fast internet access because many may need it to carry out their interests such as doing tasks, playing games, doing transactions, etc. Supported by statements from Chalid et al. (2016), recently, cafes and fast-food restaurants have become a lifestyle trend for young people and young executives. Many young people visit such cafes and restaurants because the concept of the place is considered following the Indonesian lifestyle. So that the purpose of the café to provide Wi-Fi facilities is to add to the convenience of visitors, it is also to attract the attention of consumers.

Conclusion

In this study, the attribute that most influences consumer preferences in visiting Braga Art Café are the Store Atmosphere attribute with an importance value of 50,872, indicating that consumers are very attentive to the store atmosphere at Braga Art Café. The level of an attribute that most influences consumer preferences in visiting Braga Art Café are the Good Interior level of an attribute Store Atmosphere with a utility value of 0.194. These results indicate that consumers are very concerned about the interior atmosphere at Braga Art Café, for the convenience and consideration of consumers to be willing to return to visit Braga Art Café. Consumers' most favored stimuli are seen from the stimuli with the highest score. In this study, the highest score was owned by stimuli 6.

Based on the results of this study, the author suggests that what needs to be done or implemented by Braga Art Café to attract more customers is to use attributes that follow consumer preferences, namely beautify or make the atmosphere in the café more comfortable. Ensuring affordable prices are offered according to customer satisfaction with their products and services. Creating innovations in Food Online Delivery technology to expedite the sales process at Braga Art Café if it is in an emergency that requires the café to be closed so that Braga Art Café still gets income from sales through Food Online Delivery, in addition to being able to meet the needs of its consumers if wanted to buy but was in a state of being unable to come to the place. And lastly, Braga Art Café can increase its wifi speed for prevention if one day it feels like the connection is not fast enough, which is caused by the large number of visitors who use internet access on the spot.

Limitation

The study has managerial implications for café owners, but some limitations are still emerging. First, although pandemic conditions in Bandung have been controlled, it is also necessary to be measured on the level of concern related to Covid-19 transmission. It is needed to add attributes about aspects of health safety. Public perception of health and safety protocols encourages the behavioral preferences of visiting people in certain places (Poulaki et al., 2021:845).

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