

# The Impact of COVID-19 on Consumer Behavior and How Business Mitigates it: Indonesian Small to Medium Business Owners' Perspective – An Explorative Study

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## ABSTRACT

*This research paper aims to examine the impact of the COVID-19 pandemic on consumer behavior and the strategic adjustment implemented by small to medium-size businesses. Consumer behavior has been altered. It has made organizations react to survive. To understand emerging consumer behavior, and how organizations mitigate the changes in the environment, a qualitative study on small to medium size business owners was conducted in October-November 2020. An intensive 60-minute, semi-structured interview was conducted with 23 business owners in Jakarta and its surrounding cities. The findings revealed that there are positive and negative impacts of the COVID-19 pandemic on business depending on the industry type. The type of industry also influenced the scale of the effect. Regardless of the impact, most business owners were optimistic about their businesses surviving. Consumer behavior changed to involving less human interaction, for example going online, and people became more cost-conscious. Business owners mitigated the change with a change in the type of products offered, offering promotions or price reductions and online access. From the business owners' perspective, some of the new behavior will remain after the pandemic, whilst others will revert to the old behavior. Those that offer convenience and simplicity will stay.*

**KEYWORDS:** Business mitigation; Consumer behavior; COVID-19; Crisis; SME.

## 1. Introduction

The COVID-19 pandemic has become a worldwide crisis. It affects the global economy. It is inevitable that this worldwide health natural disaster has produced a considerable crisis for firms and threatened the survival of companies globally. The impact of the COVID-19 pandemic on business has altered the aggregate demand, a result of the changes in consumer behaviour. The recommendation for

countries with widespread transmission is to impose mobility restrictions, limit social interaction, and prohibit any crowd gathering.

The world has faced several crises recently. However, the crisis caused by the COVID-19 pandemic caught everyone by surprise. No one could understand the whole situation. It affected not only a particular area or region, but also everyone worldwide on a large scale. It has lasted months and brought many changes in every aspect of people's lives. The situation is one of high uncertainty, so that it impacts dramatically on many companies. The uncertainties involved are those such as how the disease spreads, the management of the disease and how long this pandemic will last. Facing this uncertainty, the companies should respond to the changes in consumer behaviours to survive.

The world has not experienced a pandemic in over a century. Therefore, limited studies can be used as references. The studies on how

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consumers behave during and after the crisis are still limited, especially studies on consumer behaviour change because of the COVID-19 pandemic. This research paper aims to examine the impact of the COVID-19 pandemic on consumer behaviour and how it responds. The research presents data from a qualitative study involving the change in consumer behaviour from a business owner's perspective. The research questions are: (1) what are the impacts of the COVID-19 pandemic on consumer behaviour in the short term and long term. (2) What are the implications for business? (3) How does a business owner evaluate the impact of consumer behaviour change on business survival, and (4) how a company mitigate the change to survive?

The next session presents the literature review of consumer behaviour changes in facing a crisis and how it mitigates the crisis. After that, the methodology of the qualitative study is described, and the findings are presented. Finally, the conclusion, limitations and recommendations for further research are drawn.

## 2. Literature Review

Consumers develop habits about their consumption and the way they do things. Those are developed over time. However, while consumer behaviour is habitual, it is also contextual. Context can influence consumer behaviour, and four major contexts govern or disrupt consumer habits. The first is the change in the social context, such as the workplace, community, neighbours, and friends. The second context is technology. A third context that impacts consumption habits is rules and regulations. The fourth and less predictable context is ad hoc natural disasters such as earthquakes, hurricanes, and global pandemics, including the COVID-19 pandemic we are experiencing today.

The world has faced several crises before. Financial crises that were faced by the world include those such as the Great Depression in 1929-39, the Asian Crisis in 1997 and the World Financial Crisis 2007-2008. The world also has faced global pandemics before, such as Spanish flu in 1918-2020. However, studies on how consumers behave during and after a crisis are still limited, as are studies on consumer behaviour change because of the COVID-19 pandemic, which is considered a 'new' crisis. The world has never seen a pandemic on this scale in over a century. No one has a complete

understanding of the situation.

The COVID-19 pandemic has disrupted consumer behaviour through rules and regulations and natural disaster. The rules and regulations that require people to restrict their mobility and maintain social distancing have made consumers change how they do things and the type of consumption they employ. The fear of the uncertainty of the pandemic has changed people's perceptions of consumption.

The study from Herzenstein, Horsky, and Posavac (2015) in conducted during the crisis because of the terrorist attack, showed that consumers would evaluate their risk and measure the level of their control of the situation. If their perception of control is low, and perception of risk is high, they would adopt more avoidance and might shift from buying in stores or malls to a safer alternative such as online shopping. Consumer demand and behaviours have changed fundamentally during the COVID-19 crisis.

People are restricted to go out and should keep social distancing. During a crisis, consumers face fear about their future, and it will strongly impact their behaviour. The high uncertainty alters consumer behaviour to be more careful in spending money. A crisis might affect the decline in income due to unemployment. Yet, regardless of the changes in income, a crisis might cause consumers to lose confidence. The reduction in income and uncertainty influence consumption. Therefore, they will focus on the short-term rather than the long-term. During a crisis, consumers will focus on essential products and stop spending on 'investment' products or non-essential items. A study in Russia showed that the expenditure on non-essentials and health and education declined. However, a study in Korea showed that consumers tried to maintain expenditure on food, health, and education while reducing the consumption of luxury goods. After the 2008 global economic crisis, the consumers preferred to have cheaper products and cheaper retailers. Consumers started to make more price comparisons and become more rational shoppers and emphasize more on product durability and functionality. The crisis has led the consumers to become more economical, more responsible and more demanding.

The consumer's perception of a brand also changes during a crisis. Brands that are considered trusted will still be brands of choice for consumers. Consumers' perception of brands also is influenced by how the brands

respond to a pandemic. If they think that a brand responds inappropriately, they would actively switch. Company reputation also influences how consumers decide what products to consume during a crisis.

The company known to have suitable Corporate Social Responsibility (CSR) activities would create a better consumer attitude and loyalty about their product. Will the behaviour change permanently or go back after the situation is normal? Many people expect that most habits will return to normal. People, as social creatures, need to belong. They need to stay connected, even though they have to keep social distancing. Therefore, people will make an effort with technology to maintain social contact with virtual events such as a virtual reunion, virtual birthday party, virtual work out and so on. However, it is said that this behaviour will not stay permanently. The positive response to interpersonal touch will not be replaced virtually. Consumers prefer to spend on essential products during a crisis and choose cheaper products and cheaper retailers. However, previous studies showed that these behaviours return to normal after a crisis.

However, some new habits will inevitably stay. What habits will stay depends on how they impact the consumers. Habits that are considered to provide more convenience, affordability and accessibility will stay. Examples include working from home, online shopping and learning at home. Habits that will survive are also endorsed by rules and regulations (e.g. security checks after 9/11), technology (e.g., smartphone usage), and new demographics. This research aims to see the company response to behavioural changes. Whether a company reacts to a crisis with initiatives will depend on the degree of company performance. If the company performance is highly negatively impacted, the company would have a solid incentive to initiate a solution.

History tells us that a crisis induces enormous social change. This pandemic means high uncertainty and poses a risk in the future. Therefore, a company needs to understand what consumers live, face, and feel in the crisis to navigate the strategy for survival. However, understand how consumers face and why they stop purchasing is not enough.

Companies need to motivate consumers to have an optimistic outlook on the future. One of the ideas is to shift from consumerism to citizenship. Companies can encourage the spirit

of sharing, supporting and creating social relationships through their company activities. Activities that encourage helping, supporting, sharing and caring are being paid attention to by the consumer during a crisis.

When consumer behaviours change, companies need to change their strategy to survive successfully. The companies need to adjust their approach to the 'new' market environment. During the crisis, one of the changes that has been found is changing the product. They have to withdraw weak and unprofitable products. The company might need to introduce new products which are more suitable for the crisis. The introduction of the new products significantly improves company performance and the bottom line. During a crisis, consumers face fear about their future, which will strongly impact on their behaviour. This condition could be complex for a company to overcome. The consumer will be more reluctant to spend money. Adjusting the price is one option to overcome this situation, even though it might mean the price should be lowered so far if the condition is really bad. Financing and payment conditions are also a problem during a crisis. The company might need to consider supporting the consumer with a creative payment option aims.

Consumers' demands and behaviours changed fundamentally during the COVID-19 crisis. People are restricted from going out as much as before and have to maintain social distancing. Therefore, companies have to rapidly develop their online business to connect with consumers. Online business helps companies to reduce the negative impacts of a crisis. It enables accessibility in accelerating the business process, increases efficiency and saving, provides better customer services, and reaches the new market. Company reputation influences how consumers decide what products to consume during a crisis. A company that is known to have suitable CSR activities previously would gain a better reputation with consumers and loyalty about their product. Companies that respond appropriately during the pandemic will gain loyalty and respect from their customers.

### **3. Methodology/Materials**

Because the crisis caused by the COVID-19 outbreak was different from others, the impact of it on business continuity is different and complex. Therefore, a deep understanding of business owners' perception of consumer

attitudes and behaviour was needed. Qualitative methods were a powerful tool to explore those complexities since individual perceptions, behaviour, and attitude can be explored in detail.

The crisis caused by the COVID-19 outbreak changed consumer behaviour in all three domains: personality, market and policy. The changes in consumer behaviour require the business owner to adapt to ensure sustainability. Qualitative methods have the advantage of allowing people to express what is important to them in their own words. They could also share their observation of the business situation and elaborate on their strategy to navigate the changes they face with their expression.

This study was supported by 23 in-depth interviews with SME business owners who were very much affected, positively or negatively, by the COVID-19 outbreak. These qualitative procedures enabled researchers to gain insight into the underlying problem, opportunity and strategic background of business owners in navigating the business during the crisis. It should be noted that the sample size is relatively small; thus, the results should not be generalized.

### 3.1. Sample design and participants' selection procedures

The sample collection method was purposive sampling. To ensure the balance, sample criteria were set to balance the number of male and female and varied business experiences from 1-5 years, 5-10 years, and more than 10 years. Participants were from the area which was impacted heavily by COVID-19, which was the Greater Jakarta area. The in-depth interviews were held by Zoom or face-to-face if possible. The participants were approached by

researchers who also acted as interviewers. They were explained to about the purpose of the study. After some initial qualifying questions, each person was asked to participate in the study.

Participants were also explained to about the term of anonymity confidentiality and publication plan of the research. They were informed about the format and length of the interview, received the researcher's contact information, and given the right to stop and withdraw from the interview at any time. Participants also had to consent verbally. Any interview without informed consent was excluded from further analysis.

### 3.2. Interviewing procedures and analysis

The interviews were semi-structured, based on a pre-defined interview guide, and took 60 minutes on average. The focus was on consumer behaviour changes from the business owner's perspective and strategic changes implemented by the business owner.

To gain more background information on the participants, they were asked to contribute some socio-demographic data, such as age, gender, business type and experience, business location and educational background.

The in-depth interviews were digitally recorded and fully transcribed. The qualitative data analysis software NVIVO (2.0) was used to facilitate the organization and structuring of the process of coding and categorization and developing relationships among concepts.

## 4. Results and Findings

A deep 60-minute, semi-structured interview was conducted with 23 business owners in Jakarta and its surrounding cities. Table 1 and 2 showed the demographic of respondents.

**Tab. 1. Size of Business**

Size of Business	No. of Respondents
Small Businesses	11
Medium Businesses	12

**Tab. 2. Type of Business**

Type of Business	No. of Respondents
Food	7
Fashion	2
Logistics	1
Healthcare	2
Training & Education	2
Developers	2

Packaging	1
Office and School Equipment	1
Outsource Security and Cleaning	1
Other Services	4

The researcher observed the changes in the consumer behavior by business owners. The two observable types of behavior declined in shopping activities. This data was presented by 13 participants with 19 references in the discussion, and digital activities such as online shopping and online learning, was raised by 12 participants with 18 references in the discussion.

Participants observed that customers were more cautious in spending money. They prioritized basic needs and reduced the consumption of non-essential products. The participants also observed that the consumers were more price cautious. Consumers actively found alternative, cheaper products. They only buy the necessities and in small packages.

**Tab. 3. Changes in Consumer Behavior**

Topic	No. of Participants	Raised in Conversation
Limit their purchase because of limited budget	13	19
More online activities	12	18
Find cheaper products	2	2
Buy in a small package	1	2
Only buy what they need	3	3
No change	1	1

**Tab. 4. Discussion of Consumer Behaviour**

Topic	Participants' Comment
Limit the purchase	<p>Customers used to buy stock items for the next three weeks to one month. For example, notebooks for stock items from seven months before the new school year starts. However, now customers only buy 2-3 days of stock according to their needs and use the stock of goods first.</p> <p>Most of our consumers were students. Since they did not go to school therefore, they did not get their pocket money or only limited. They allocated the money towards more important things, such as foods. drinks etc.</p>
Online Activities	<p>Seminars were conducted online. For example, seminar activities from foreign universities were not allowed to come to Indonesia. Besides being able to reach all the participants in Indonesia, it also saved costs.</p> <p>The respondents' view of online training has changed, due to the assumption of cost savings compared to offline training. Proposed to change to the online training.</p> <p>Because of mobility restrictions, my customer cannot, or is afraid to, come to my restaurant. Therefore, I now open delivery orders and actively promote on social media (FB and IG).</p>

The second observable consumer behavior change was digital activities. Twelve participants raised this issue. According to them, this activity was visible across the generations. Event older generations were forced to shift to use Zoom and do online shopping. This shift has produced the opportunity for online business. The researcher was curious when the participants asked their opinion as to whether

the change of behavior would stay. Almost all participants argued that online shopping would stay for the younger generation, but it would not for the older generation. They claimed that the younger generation were used to doing everything online; therefore, online shopping was natural. The older generation valued the close connection and the 'touch and feel' sensation; therefore, offline shopping was still enjoyable.

The participants from the education industry claimed that, after the pandemic ended, offline learning would come back. They argued that the effectiveness of online learning is questionable. The relationship with students did not run well with online learning. A similar opinion was also raised by participants from the food industry. They claimed that the dine-in business would be back to normal after the pandemic ends for all generations. However, the data showed that the habits that would stay after the pandemics were ones that offer conveniences, such as Work from Home (WFH) and online document submission. When people were asked about the impact of COVID-19 pandemic on their business, most of them gave responses about the declining

demand. Seventeen participants claimed this with 22 references about this topic during discussion. Only three participants claimed no decline in demand. Based on the interview, nine participants claimed that the pandemic had caused the declining of revenue; three participants claimed that the revenue was flat. Surprisingly, five participants claimed that they had increased their revenue. The participants claimed that the declining demand caused by consumer behavior changes due to declining revenue, cautious spending, and health protocol implementation. The ones that claimed to have increased revenue were because the COVID-19 pandemic provided opportunities to their business, such as in the healthcare industry, online learning and online food industry.

**Tab. 5. Discussion on Revenue**

Topic	Participants' Comment
Increase in Revenue	In the first three months, the revenue was decreasing since I did not know what to do. Afterwards, due to the tight regulations for the health industry, my customers needed to purchase more. After the pandemic, I changed my product to ready to eat products for online orders. It was accepted well in the market, so my revenue has increased. I started an online course before COVID-19. With mobility restrictions, the number of students in an online class is increasing significantly, like five times.
Decline in Revenue	My wedding organizer company was almost in zero revenue. My customers are high-end. With mobility restrictions, the big wedding party celebrations were not allowed. My online clothes revenue was down to 50%.

In other to survive, all participants argued that they have to mitigate the company strategy. From the spending point of view, only one participant reduced the number of employees, two still recruited new employees, and nine maintained the number of employees. As for

those who reduced the budget, yet kept the number of employees, the companies implemented a work hours adjustment (alternate working days or reduced number of working hours), WFH, and temporary lay-off.

**Tab. 6. What Companies Do to Manage Their Costs?**

Topic	No. of Participants	Raised in Conversation
Reducing the number of employees	1	1
Recruiting new employees	2	2
Reducing Employee Compensation	1	1
Arranging Working Hours	5	5
Keep the number of employees	9	9

To survive, almost all respondents applied several business changes. Four of the respondents claimed that they went online for their mainstream business. Five of the respondents tried to maintain their revenue by reducing prices by giving a promotion or discount. Five respondents improved the feature of their products to fit the new needs of

their customers. Five customers introduced new products. Three respondents claimed they mitigated improving operations, such as finding cheaper suppliers and distributors and reducing the level of goods inventory. However, there are 12 of them who said they did nothing. These were mostly from industries that cannot innovate

fast, such as developers, logistics companies, outsourced security and cleaning services offline clothes shops and high-end wedding organizers. The other types of business, which

did not change, were one that enjoy an increased revenue because of the COVID-19 pandemic, such as online courses, packaging stores and health care.

**Tab. 7. Company Mitigation**

Topic	No. of Participants	Raised in Conversation
Go digital/online	4	6
Reduce price with discount	5	5
Improve product features	5	5
Introduce new products	5	6
Manage stock	1	1
Change in distribution/supplier	2	2
Closely monitor what competitors do	1	1
Products align with health protocols	2	3
No Change	12	26

**5. Discussion**

The COVID-19 pandemic has become a worldwide crisis. It has influenced health, economics and people’s wellbeing. Mobility restrictions were one of the measures to prevent the spreading of the disease. Because of mobility restrictions, people were forced to reduce or stop doing many activities. Since COVID-19 was a new kind of crisis, many things were still unknown, including customer behaviour change.

Two main reasons caused the shift to digital or online activities during this pandemic. The first one was the rules and regulations applied by the health and government body as measures. People shifted to online activities, not because they wanted to, but because they had to.

They could not meet with other people directly. People could not shop in the mall. Dining in restaurants was banned. People shifted because the original activities were no longer available to them. Therefore, they tried to find the best alternative, which is online activities.

Even if in some cases, people still could do onsite learning, shopping and dining, most people shifted to online activities. The reason was because of fear. Confirming the study done by Herzenstein, Horsky, and Posavac (2015) in people would evaluate their risk and measure the level of their control of the situation during a crisis. If their perception of power was low and the perception of risk increased, they would adopt more avoidance. People would avoid doing activities because they fear the risk. Therefore, they choose to do a safer alternative such as online learning and online shopping. Just like other crises that happened before, the situation caused by COVID-19 also involved

uncertain factors.

However, the crisis caused by COVID-19 had a new level of uncertainty. Nobody from a health organization, government body, industry and other institution knew about the situation. They did not know how this crisis would evolve, how long it would last and the best approach with which to solve it. No one had a complete understanding of the situation. When consumers faced fear about their future because of uncertainty, it would impact their behaviour strongly. It happened because they were afraid of their future income; they thought that their consumption would change. This study confirmed the study from, which claimed that the consumption change during a crisis is that people focus on basic needs. This study showed that consumers limited their purchase. They stopped purchasing non-essential products. They also moved to cheaper products as claimed by on how consumers behaved in facing uncertainty during a crisis.

The COVID-19 pandemic has changed consumer behaviour. It happened because of the fear of risk control and uncertainty. However, the new behaviour change identified was the fast adoption of online activities. This new behaviour adopted across generations (X, Y and Z) and industries. The rapid acceptance of online activities was because of two reasons: the first was due to the feeling of fear, and the second was about the rules and regulations. Anxiety caused by the low level of control limited people’s movements even if they were still allowed to do it. The high uncertainty around the condition of the COVID-19 pandemic made people afraid. Rules and regulations also limited people’s movement. As

the best alternative to the 'traditional way' is online, people shifted to online activities.

The study investigated the changes in consumers' behaviour that would stay. It revealed that not all changes would last. Confirming and, business owners' perceptions claimed that most habits would go back to normal, such as shopping in the mall, dining in restaurants, meeting in person, and onsite classes. These habits would be expected to go back to normal because people sacrifice some enjoyment by not doing these activities. People are social creatures who need social contact. Virtual activities cannot replace the closeness of direct contact. Therefore, these kinds of activities would be expected to be back to normal as soon as the condition improve. Confirming, some habits would stay. The kind of habits that would stay are ones offered more as convenience and become necessities to consumers, such as WFH, online document submission, and personal hygiene care.

Considering the changes in consumer behaviour, the researcher wondered whether there is a need for business owners to change their strategy or not. The shift in consumer behaviour had a considerable impact on business revenue in almost all businesses. To survive, the company has to change their strategy. The strategy change was based on how consumers changed. Shifting to online platform was one of most popular things businesses of any size did. If they had existed online, they increased their online exposure with more promotion online, being on more platforms, providing online access, online transactions, and online payment. Being online makes them more accessible to their consumers who cannot contact them or may be afraid to contact them, directly. Being online maintains their existence and relationship with their customers.

Consumers have limited their purchases and their budgets. To address this, companies should change their strategy by offering cheaper products, making promotions, introducing new products, smaller packages, and offering better value for their existing products. To improve the revenue and bottom line, the company has to meet consumer needs. During a crisis, consumers become more rational; therefore, the companies need to adjust their products to be more affordable. As a problem is that consumers focus more on essential products, the company has to review its product portfolio. They had to withdraw or

limit non-essential products. If the company did not have essential products to offer, they need to develop new products.

In order to survive themselves, companies have to make some adjustments to reduce costs. Typical moves, such as managing inventories, finding cheaper partners, and cutting the operation costs, were observed in this crisis. However, interestingly, in small and medium businesses, retrenching the employees was the last thing they did. They choose to arrange working hours or cut some of the benefits first. The small and medium-sized companies considered their employees as their family. The employees have contributed to the growth of the business so far.

## 6. Conclusion

The research addressed these research questions: What are the impacts of the COVID-19 pandemic on consumer behaviour in the short term and the long term? What are the implications for business? How does a business owner evaluate the effects of consumer behaviour change on business survival? How do companies mitigate the change to survive? Like other crises, because of the uncertainty of the crisis, consumers have become more rational shoppers.

The difference between this crisis and others is direct contact access. Because of this, the online activities of consumers have increased significantly. Most changes will go back to normal, but some changes that offer more convenience will stay after the crisis.

The crisis because of the COVID-19 pandemic has a massive impact on business. Most of the companies declined, but some industries still showed growth, such as healthcare, online education and online food. The risk to revenue forced the businesses to change their strategy. The strategy introduced was one that addressed consumer behaviour changes. The companies increased their online existence, made the price more affordable, and introduced new products.

### 6.1. Theoretical implication

This study provides evidence of how consumer behaviour changed during the COVID-19 pandemic, based on business owner insight. Since the COVID-19 pandemic is a new phenomenon, some of the changes observed are also new, such as the fast adoption of online activities. This study also confirmed how the businesses need to change quickly when consumers change. This rapid change is



possible in small and medium-size businesses.

## 6.2. Managerial implication

In a crisis, fast action is needed. During a crisis, consumers change their behaviour. This study revealed that small and medium-size businesses are quick in adapting to a new environment. To survive, adaption is key. The ability to adapt faster to the new environment might be an insight for big corporations. They have to act like a start-up to adjust with the environment.

## 6.3. Limitation of study and further research

This study only interviews business owners to see consumer behaviour. Therefore, it might not address actual consumer behaviour. Furthermore, the changing behaviour would be clearer if addressed directly from the consumer's point of view. Further study with consumers as participants is recommended. The participants of this study come from a wide range of businesses. Therefore, the issues arise broadly. With a focus on a particular business, a researcher might capture the problems in more detail. The recommendation for further study is to understand the positive and negative impact of the crisis to certain type of business.

## References

- [1] Arora, Namita and Arora Vijay, Life-Long Education for the Global Workforce in the Socio-Engineering Age, *Pertanika J. Soc. Sci. & Hum.* Vol. 23, No. 1, (2015), p. iii – xxvi.
- [2] Cohen, J. *Statistical power analysis for the behavioral sciences*, Hillsdale, NJ: Lawrence Erlbaum, (1988).
- [3] David, F & David, F. *Strategic Management*, 16th Edition. New York: Pearson, (2017).
- [4] DiClaudio, M. People analytics and the rise of HR: how data, analytics and emerging technology can transform human resources (HR) into a profit center, *Strategic HR Review*, Vol. 18 No. 2, (2019), pp. 42-46.  
Doi.org/10.1108/SHR-11-2018-0096
- [5] Ghobakhloo, M. & Fathi, M. Corporate survival in industry 4.0 era: the enabling role of lean-digitized manufacturing, *Journal of Manufacturing Technology Management*, Vol. 31, No. 1, (2020), pp. 2-3.
- [6] Guan, X. and Frenkel, S. How perceptions of training impact employee performance: Evidence from two Chinese manufacturing firms, *Personnel Review*, Vol. 48, No. 1, (2019), pp. 163-183.  
Doi.org/10.1108/PR-05-2017-0141
- [7] Ikapel, O, Analysis of Intellectual Capital and Financial Performance of Commercial Banks In Kenya: An Application Of Value Added Intellectual Coefficient (VAICTM), *International Journal of Research in Finance and Marketing (IJRFM)*, Vol. 6, No. 7, (2016), pp. 1~16. ISSN(o): 2231-5985.
- [8] Johnson, H. T. Management Accounting in an Early Integrated Industrial: E. I. duPont de Nemours Powder Company, 1903-1912. *The Business History Review*, Vol. 49, No. 2, (1975), pp. 184-204.  
Doi.org/10.2307/3113699
- [9] Kim, Boyoung; Kim, Hyojin; Jeon, Youngok Critical Success Factors of a Design Startup Business. *Sustainability*, Vol. 10, No. 9, 2981, (2018), p. 4.  
Doi:10.3390/su10092981
- [10] Penrose, Edith. *The Theory of The Growth of The Firm* , 4th Edition. New York: Oxford University Press, (2009).
- [11] PWC, *Global Industry 4.0 survey: Industry 4.0: Building the digital enterprise*, (2016), p. 4.
- [12] Richards, Gregory; Yeoh, William; Chong, Alain Yee Loong; Popovič, Aleš Business Intelligence Effectiveness and Corporate Performance Management: An Empirical Analysis. *Journal of Computer Information Systems*, (2017), p. 2.  
Doi:10.1080/08874417.2017.1334244
- [13] Saroso, H., Syahchari, D. H. , Sudrajat D., Lasmy and Herlina, M. G. , Managing Digital Transformation Dilemma with Industrial Mapping, 2021 *International Conference on Information Management*

and Technology (ICIMTech), (2021), pp. 165-170.  
Doi: 10.1109/ICIMTech53080.2021.9535025.

[14] Seddon, Peter B.; Constantinidis, Dora; Tamm, Toomas; Dod, Harjot How does business analytics contribute to business value?. *Information Systems Journal*, (2016).  
Doi:10.1111/isj.12101

[15] Smart, S, Gitman, L & Joehnk, M. *Fundamentals of Investing*, 13th Edition. New York: Pearson (2016).

[16] Taylor, F. W., *The Principles of Scientific Management*, Harper & Brothers, New York, (1911).

[17] Torrington, D., Hall, L., Taylor, S., & Atkinson, C. *Human Resource Management: 9th edition* edition. United Kingdom: Pearson, (2014).

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