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The moderation effect of uncertainty environment on SME business performance

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Abstract. The Covid-19 pandemic has had an impact that has never been felt before by small and medium enterprises (SMEs) business actors in Indonesia. In business, this situation is called environmental uncertainty. Environmental uncertainty is a condition in which a person is constrained to predict the surrounding situation so he tries to do something to deal with the environmental uncertainty. Environmental dynamics with their uncertainties play a positive moderate role between strategic flexibility and firm performance, which is consistent with the results of previous studies. This research method used a mixed research design with a sequential explanatory strategy. The population of this research was SME's Sidorajo which has the following criteria: doing this business as the main job, running the business for at least 3 years and being active in community development activities and the department. The sample obtained was 100 respondents. The data collection technique was carried out by distributing online questionnaires via google form and FGD with SMEs and Koperindag Office. The results show that business strategy has a positive effect on business performance, strategic flexibility has a positive effect on business performance, environmental uncertainty has a negative effect on business performance and strategic flexibility has no effect on SMEs business performance in Indonesia when moderated by environmental uncertainty. Therefore, environmental uncertainty is not able to play a role as a moderating variable of the influence of strategic flexibility on the performance of SMEs businesses in Indonesia.

Keywords. Environmental Uncertainty, SME Performance, Flexibility, and Covid-19.

1. Introduction

The spread of the Corona Virus Disease known as Covid-19 in Indonesia from the end of February has resulted in the cessation of all axes of community life, from the upper class to the lowest one. The impact of Covid-19 has made the public psychologically disturbed, starting from the emergence of fear, suspicion and anxiety that shackles their feelings. Every day, news of death continues to increase from both the general public and medical personnel. In addition, the number of suddenly ill people is increasing in each area, which triggers a disturbing and confusing environment.

With the development of the Covid-19 outbreak, the central and regional governments began to take active action by issuing social distancing and physical distancing regulations. This condition results in people having to stay at home and not go out if there is no urgent need. Regional quarantine has also begun to apply in public places such as hotels, entertainment venues, supermarkets, trade centers and many other public facilities that are closed.

This condition is slowly having a significant impact on economic life in society. Trading transactions began to decrease from top to bottom transaction activities. Traders in crowded centers began to stop not selling, so that naturally, there was a multi-factor effect on the activities of the manufacturers which began to reduce the amount of production and reduce the working hours of their employees. The condition of the Covid-19 pandemic is deeply felt by business players in the small and medium enterprises (SMEs) sector throughout Indonesia, one of which is in Indonesia, which is currently known as the city of SMEs and has 248,306 SMEs (2016 Economic Census and 2018 SUTAS) spread over 14 districts. Most of these SMEs produce processed food, fashion and handicrafts.

In the era of the Covid-19 pandemic, there are several SMEs owners who are required to be able to predict social and physical factors that are uncertain which will have an impact on the performance conditions of the company, where the ability to compete with other companies will be less effective due to inconsistencies between the strategies made with the conditions that occur in the future. [24] state that industrial organizations that have good resources and capabilities, are integrated with good business strategies, and are suitable for a dynamic industrial environment will increase competitiveness and performance. The first factor tested in this study is how business strategy affects performance.

The right business strategy will improve company performance if it is supported by stable environmental conditions. The existence of Covid-19 ultimately creates environmental uncertainty, which is a situation where a person is constrained to predict the situation around him so he tries to do something to deal with the uncertainty of the environment [16]. In conditions of high uncertainty, it is difficult for individuals to predict the failure and success of the decisions they make [8]. As a business actor, it is necessary to understand environmental uncertainty because in business the environment is dynamic in nature, which is prone to changes both by the level of hyper-competitive competition, changes in the tastes of the community as well as the occurrence of disasters or outbreaks / pandemics like today [9].

In this situation, it is difficult for a businessman to predict when it will return to normal, therefore it is required to be creative, innovate so that the business can survive (sustainable) because one of the entrepreneurial mindsets is to be creative, hard work and innovative in facing the dynamics in business ([7]; [26]; and [17]). According to research by [28], environmental uncertainty has an effect on innovation strategies and ultimately affects company performance. The main model of this study refers to the research of [15] where environmental dynamics with its uncertainty play a positive moderate role between strategic flexibility and company performance, which is consistent with the results of previous studies [31]. This confirms that the relationship between strategic flexibility and firm performance is influenced by a dynamic environment.

Strategic flexibility needs to be measured first to see whether the company has had multiple strategies in dealing with environmental uncertainty. This phenomenon shows the existence of a diversification strategy carried out by several SMEs by selling and making new products that are needed by the community, such as masks, instant herbs and spices, PPE clothes, Face Shield / face shields. However, the problem is that there are many SMEs in fashion, food and handicrafts who remain defensive with the products that have been produced so that they do not get the income as expected, even many of them are forced to stop producing.

From the above phenomena, it can be concluded that the common problems faced by SMEs are whether the uncertainty of the Covid-19 environment is able to moderate their business strategies which in turn will have an impact on SME Business Performance in Indonesia.

2. Literature review

2.1. Environmental Uncertainty

[19] defines uncertainty as the uncertainty of the state of the environment, the inability to predict the impact of environmental changes, and the inability to estimate the consequences of the choice of answers. [4] states that environmental uncertainty can be explained as a lack of critical environmental information when managers make decisions. Environmental uncertainty, according to [6], stands out when the demand and actions of competitors are difficult to predict, and the rate of obsolescence is high. This uncertainty, coupled with an endangered market position due to new competitors and product replacement, makes environmental uncertainty particularly acute. Companies must deal with this pressure as effectively as possible. Indicators for measuring the Environmental Uncertainty variables [21] are as follows:

- (1) The actions of competitors that are difficult to predict
- (2) The demand for innovative goods and services is highly uncertain.
- (3) Market position under threat.
- (4) Demand is very difficult to predict.
- (5) Number of substituted products
- (6) Products and services quickly become obsolete

2.2. Business strategy

Strategy is a long-term plan of action designed to achieve the goals of a business, a strategy that is distinguished from tactics or immediate action with appropriate resources [23] According to [14] business strategy is a strategy at the level of a business unit or product line that focuses on the company's competitive position. There are four types of business strategies proposed by [18], namely prospector, defender, analyzer and reactor. The typology proposed by [18] is based on the level of product and market changes experienced by the company due to the strategy it implements.

2.3. Strategic Flexibility

Strategic flexibility is a type of adaptability that copes with an unpredictable environment and has an important impact on company performance [1]. In [27] 's research divides strategic flexibility into resource management flexibility and capacity management flexibility. Resource flexibility is the ability to make a company grow, produce, distribute and sell products effectively. Capacity flexibility is the ability to discover new resources and integrate these resources into a dynamic environment, and can be used for innovation and income generation. Capacity flexibility includes various internal factors of coordination flexibility proposed by [25], and can more effectively determine the strategic flexibility of a company [29].

2.4. Business performance

Business performance, as stated by [22], is the ability to consistently configure and combine activities in a relatively good way compared to competitors. Measurement of business performance by referring to the Balance Score Card which is measured in 4 perspectives, namely the performance of Finance, Human Resources, Marketing and Operations. Business performance is measured by sales turnover and profit after tax are used as performance

measures ([2]; [20]). In this study, using sales / turnover and market addition as a measure of business performance [30].

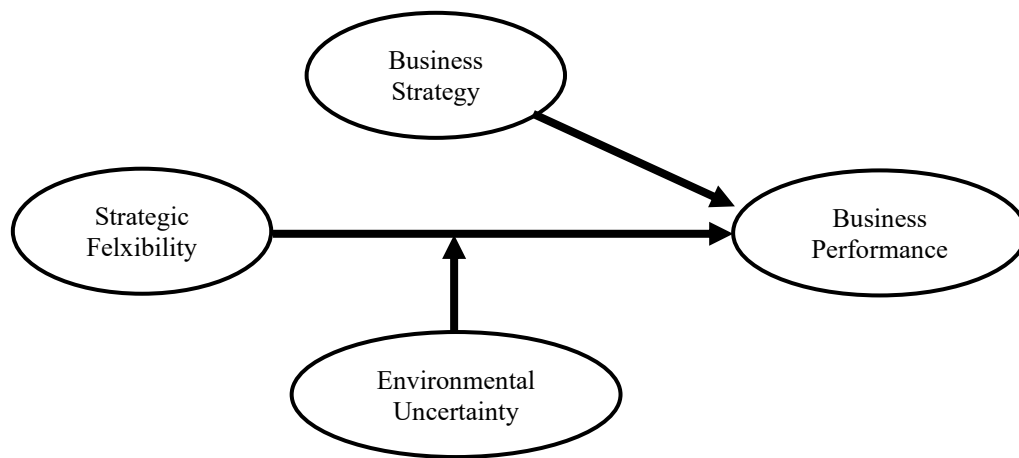


Figure 1. Conceptual Model (processed, 2020)

Research Hypothesis:

1. H1: It is suspected that there is an effect of business strategy on business performance
2. H2: It is suspected that there is an effect of strategic flexibility on business performance
3. H3: It is suspected that there is an effect of environmental uncertainty on business performance
4. H4: The moderating role of Environmental Uncertainty in Strategic Flexibility on Business Performance

3. Method

This study used a mixed method. The implementation of this mixed methods research combined quantitative and qualitative research methods. The type of mixed research used a sequential explanatory strategy. The problem in this research was a social and dynamic problem. This study discussed the relationship between strategic flexibility and the performance of SMEs which were influenced by the dynamic environment during the Covid-19 pandemic. The first thing that needed to be done in this study is to obtain quantitative data to provide an overview of the factors that affect the performance of SMEs. Then after getting the data above, the researchers continued qualitative research with the aim of conducting deeper exploration with observations about the effect of the Covid-19 pandemic on business strategy and management so that SMEs can survive and compete.

The source of data used was primary data obtained from SMEs in Indonesia through questionnaires. A total of 100 respondents responded to the questions posed in this study. Furthermore, the data from the respondents' answers were processed and analyzed using the Path Analysis technique. The second source of data is from Indonesia cooperative and trade service through Focus group discussions to obtain data related to government policies for SME actors during the Covid 19 pandemic.

4. Result and discussion

4.1. Validity test

As agreed, for a suitable reflective model, the outer loadings must be above 0.70 [10]. However, at the scale development research stage, the outer loading of 0.50 to 0.60 is still

acceptable [13]. In this study, all values of outer loadings of each item of business strategy statement, strategic flexibility, environmental uncertainty and business performance are greater than 0.50. This shows that all items of the research variable statement are valid.

4.2. Reliability Test

In a model adequate for exploration purposes, composite reliability must be equal to or greater than 0.60 ([3]; [11]); equal to or greater than 0.70 for a model adequate for confirmation purposes [10]; and equal to or greater than 0.80 is considered good for confirmatory research [5]. According to convention, the same limit applies to the value of Cronbach's alpha, which is greater than or equal to 0.80 for a good scale, 0.70 for an acceptable scale, and 0.60 for a scale for exploration purposes [12]. It can be seen in table 3 that the value of composite reliability and Cronbach's alpha for all variables is greater than 0.70. So, the variable model has met the requirements for the composite reliability value and Cronbach's alpha or has good and strong reliability.

Table 1. Validity and Reliability result

Variable	composite reliability	cronbach's alpha
Strategic Flexibility	0.919	0.932
Environmental Uncertainty	0.908	0.924
Business Strategy	0.890	0.905
SMEs Performance	0.924	0.941

4.3. Hypothesis testing

Table 2. Hypothesis Result

Variable	Original Sample (O)	T Statistic	P-Value
Business Strategy -> SMEs Performance	0.668	4.281	0.000
Strategic Flexibility -> SMEs Performance	0.226	2.060	0.040
Environmental Uncertainty -> SMEs Performance	-0.507	2.977	0.003
Moderation Effect of Environmental Uncertainty on Strategic Flexibility -> SMEs Performance	-0.095	1.000	0.318
Adjusted R Square	0.330		

The model of the influence of business strategy and strategic flexibility on business performance provides an adjusted r-square value of 0.330, it can be interpreted that the dependent variable construct can be explained by the independent variable in this study at 33.0%, while other variables not included in the study are able to explain the business performance of 67.0%.

In table 3, it is said to have an effect, if the significance level of the P-Value is <0.05 or the level of significance of the T-Statistics > 1.96 [12]. The results showed that hypothesis 1, hypothesis 2, and hypothesis 3 were supported. This means that the better the business strategy of SMEs, the better the performance of SMEs, the better the flexibility of strategies that SMEs have, the better the performance of SMEs, and the greater the environmental uncertainty experienced by SMEs, the more likely it will be worsening the performance of SMEs. While hypothesis 4 is not supported, the analysis results show that the positive effect of strategic

flexibility on business performance has no effect after being moderated by environmental uncertainty.

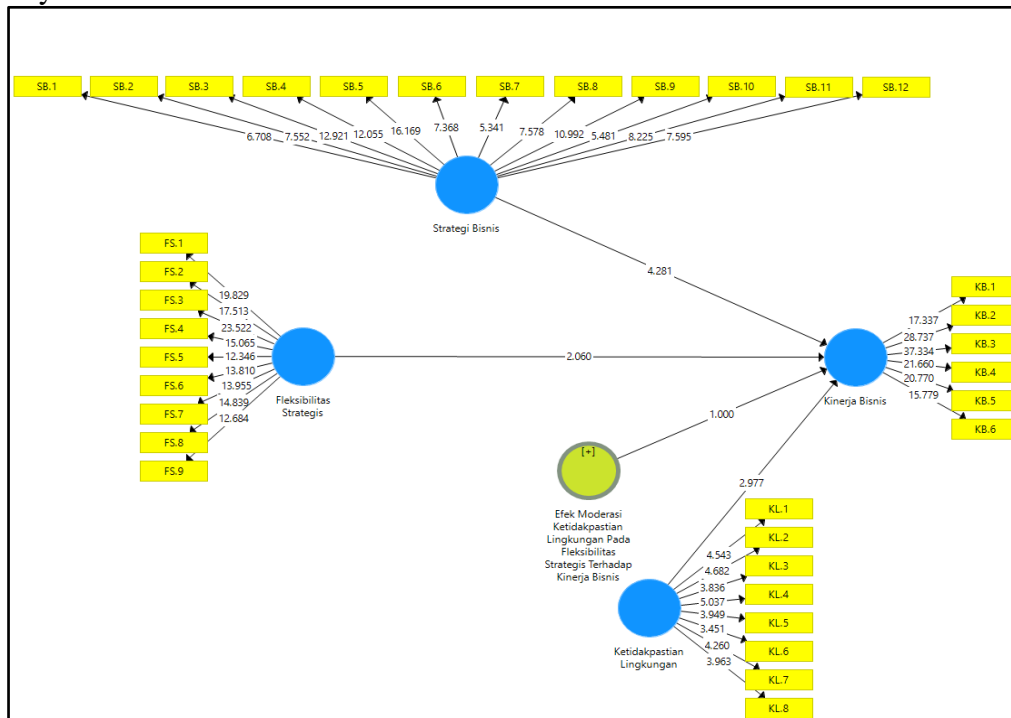


Figure 1. Full Model Path

5. Discussion

5.1. The Effect of Business Strategy on Business Performance

The results showed that business strategy had a positive effect on business performance ($\beta = 0.668$; $4.281 > 1.96$; $0.000 < 0.05$). It means that the better the business strategy of SMEs, the better the performance of SMEs in Indonesia. In real terms, SMEs are currently developing strategies in marketing their products by adding product variants, selling online and offline and most of them have an impact on their performance. The performance of SMEs in this case is measured by the increase in their income, even though it is very small or even just getting income instead of not. Besides, SMEs feel that by developing their strategies, the current marketing area is wider because through online, any market can be reached without any restrictions. This is as conveyed by the head of Indonesia Cooperative and Trade Agency that currently SMEs are facilitated in online marketing learning, assistance in preparing documents in product export activities through online systems and product design development, so it is hoped that Indonesia SMEs can expand their market share.

5.2. The Effect of Strategic Flexibility on Business Performance

The research results showed that strategic flexibility had a positive effect on business performance ($\beta = 0.226$; $2.060 > 1.96$; $0.040 < 0.05$). This means that the better the strategic flexibility of SMEs, the better the performance of SMEs in Indonesia. At the time of Covid-19 pandemic, it is very demanding for the actors to pay attention to environmental changes carefully and in detail, so that the strategies applied are in line with environmental changes. During the pandemic, many SMEs are moved to change the products sold according to environmental needs, they switch to selling masks, spicy drinks and selling their products not only offline but also online. Many of them learn about various frozen processed foods because people are increasingly limiting physical distance, so they often hoard a lot of food, meaning that the intensity of shopping and going out is very limited. As it turns out, the flexible behavior

of SMEs in responding to market needs has a profound impact on performance, because many SMEs do not immediately respond to the dynamic environment whose income continues to decline even to minus.

5.3. The Effect of Environmental Uncertainty on Business Performance

The results showed that environmental uncertainty had a negative effect on business performance ($\beta = -0.507$; $2.977 > 1.96$; $0.006 < 0.03$). It means that the greater the environmental uncertainty experienced by SMEs, the worse the performance of SMEs in Indonesia will be. Environmental uncertainty in this case is the Covid-19 pandemic which hits all levels of society starting March 2020 greatly impacting the performance of SMEs and if this condition is prolonged, the condition of economic growth will also decline. Some SMEs are forced to lay off their employees and even stop producing because no orders or buyers arrive. Many SMEs complain that they no longer have savings, all of which are used to cover living costs. Besides that, according to the head of the Koperindag Office, the current condition of SMEs also receives a lot of pressure from certain officials related to licensing and the use of illegal raw materials, even though in real terms these SMEs have official business requirements documents in accordance with applicable regulations and they use normative standard materials because the Department of Education and Culture also conducts monitoring and evaluation in the field. In the current conditions of environmental uncertainty, SMEs players are indeed experiencing a lot of psychological pressure and even demotivation which ultimately has an impact on their performance.

5.4. The moderating role of Environmental Uncertainty in Strategic Flexibility on Business Performance

The research results showed that the positive effect of strategic flexibility on business performance did not affect performance, meaning that when SMEs implement flexible strategies in an environment of environmental uncertainty, they cannot strengthen their business performance improvement. It is understandable that SMEs are actually creative in developing their strategies, but their resources are very limited, especially capital if they have to invest even more expensive. Besides, their psychological burden due to this pandemic situation is so real that it even affects their motivation to do business. If they do not consider their family, employees and this business are the main effort in making a living.

6. Conclusion

From the results of this study it can be concluded that:

1. Business strategy has a positive effect on business performance, so the more precise the business strategy carried out by SMEs in Indonesia, the better the performance of SMEs in Indonesia.
2. Strategic flexibility has a positive effect on business performance so that the more strategic flexibility that is carried out by SMEs in Sidoarjo, the better the performance of SMEs in Indonesia.
3. Environmental uncertainty has a negative effect on business performance so that the greater environmental uncertainty experienced by SMEs in Indonesia, the worse the performance of SMEs in Indonesia.
4. Strategic flexibility has no effect on the performance of SME businesses in Indonesia when moderated by environmental uncertainty, so that when SMEs implement a flexible strategy in an atmosphere of environmental uncertainty they cannot strengthen their business performance if they are not supported by strong resources.

Suggestions for further research are to develop relevant variables in supporting current SMEs business performance such as personality, emotional branding and government policy. As well as obtaining data from SMEs nowadays it is more practical online but must be supported by clear documentation and interview or FGD activities.

References

- [1]. AAKER, D. A., & MASCARENHAS, B. (1984). The need for strategic flexibility. *Journal of Business Strategy*, 5(2), 74-82.
- [2]. CAVUSGIL, S.T. & S. ZOU. (1994). Marketing strategy-performance relationship: An investigation of the empirical link in export market ventures. *Journal of Marketing*, 58, 1-21.
- [3]. CHIN, W. W. (1998). The partial least squares approach for structural equation modeling. In *Modern Methods for Business Research* (G A Marcou, pp. 295–336). Lawrence Erlbaum Associates.
- [4]. DAFT, R.L., (2010), *Organization Theory and Design*, Tenth Edition, South-Western Cengage Learning, Ohio, USA.
- [5]. DASKALAKIS, S., & MANTAS, J. (2008). Evaluating the impact of a service-oriented framework for healthcare interoperability. *Proceedings of MIE2008 (Studies in Health Technology and Informatics)*, 285–290.
- [6]. DRECHSLER, W. & M. NATTER. (2012). Understanding a firm's openness decisions in innovation. *Journal of Business Research*, 65, 438-445.
- [7]. FALAHAT, MOHAMMAD; GARY KNIGHT; ILAN ALON, (2018). Orientations and capabilities of born global firms from emerging markets, *International Marketing Review*, <https://doi.org/10.1108/IMR-01-2017-0021>
- [8]. FISHER, C. (1996). The Impact of Perceived Environmental Uncertainty and Individual Differences on Management Information Requirement, *A Research Note*.
- [9]. GOVINDARAJAN, V. (1984). Appropriateness of Accounting Data in Performance Evaluation: An Empirical Examination of Environmental Uncertainty as An Intervening Variable. *Accounting Organizations and Society*, 9(2), 125-135.
- [10]. HENSELER, J., RINGLE, C. M., & SARSTEDT, M. (2012). Using partial least squares path modeling in international advertising research: basic concepts and recent issues. In *Handbook of Partial Least Squares: Concepts, Methods and Applications in Marketing and Related Fields* (Okzaki, S, pp. 252–276). Springer.
- [11]. HÖCK, M., & RINGLE, C. M. (2006). Strategic networks in the software industry: an empirical analysis of the value continuum. *IFSAM World Congress*. <http://www.ibl-unihh.de/IFSAM06.pdf>
- [12]. GARSON, G. D. (2016). *Partial least squares: regression & structural equation models* (2016th ed.). Statistical Publishing Associates
- [13]. GHOZALI, I., & LATAN, H. (2015). *Partial least squares concepts, techniques and applications using the smart 3.0 program* (2nd ed.). Diponegoro University Publishing Agency.
- [14]. GRIFFIN, RICKY W., AND EBERT, RONALD J. (2006). *Business*, 8th edition. Pearson Education Inc: New Jersey.
- [15]. LI, W., ZHAN, J., & LU, Y. (2016). A study of transformational leadership, strategic flexibility, and firm performance: The moderating role of environmental dynamism. *International Interdisciplinary Business Economics Advancement Journal*, 1(2), 73-84.

- [16]. LUTHANS, FRED. (1998). *Organizational Behavior (Eight Edition)*. New York: McGrawHill Co
- [17]. MARÍN-IDÁRRAGA, DIEGO ARMANDO & CUARTAS-MARÍN, JUAN CARLOS. (2019). Relação entre inovação e desempenho: Impacto da intensidade competitiva e do slack organizacional, *RAE - Revista de Administração de Empresas*, 59(2).
- [18]. MILES, R.E. DAN C.C. SNOW. (1978). *Organizational Strategy, Structure, and Process*. New York: Mc Graw-Hill.
- [19]. MILLIKEN, FRANCES J. (1987). Three Types of Perceived Uncertainty About the Environment: State, Effect, and Response Uncertainty, *The Academy of Management Review Follow journal* Vol.12, No.1, pp. 133-143. DOI: 10.5465/AMR.1987.4306502
- [20]. MORRISON, A. & K. ROTH, K. (1993). Relating Porter's configuration/coordination framework to competitive strategy and structural mechanism: *Analysis and implications. Journal of Management*, 19(4), 797-808.
- [21]. MUKHERJI, ANANDA; & MUKHERJI, JYOTSNA. (2017). Environmental Uncertainty and Positive Performance of Small Firms: The Roles of Key Mediators. *Journal of Organizational Psychology*, 17(3), 24-39.
- [22]. PORTER, M. E. (1991). Towards a dynamic theory of strategy. *Strategic Management Journal*, 12, 95-117.
- [23]. HAMEL, GARY AND PRAHALAD CK. (1994). *Competing for the future*. School Press: Harvard Business.
- [24]. RUBIO BAÑÓN, A. & ARAGÓN, A. (2009). Recursos Críticos y Estrategia en la Pyme industrial. *Revista ICE Tribuna de Economía*, 846, 193-212.
- [25]. SANCHEZ, R. (1995). Strategic flexibility in product competition. *Strategic Management Journal*, 16(1), 135-159.
- [26]. SHOUYU, CHEN. (2017). The Relationship between Innovation and Firm Performance: A Literature Review. *Conference 7th International Conference on Social Network, Communication and Education (SNCE 2017)*. Doi 10.2991/snec-17.2017.132.
- [27]. TEECE, D. J., PISANO, G., & SHUEN, A. (2009). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533.
- [28]. TING, S. HSU, H. WANG AND D. WANG. (2011). Innovation strategy and firm performance: The moderating role of environmental munificence, *ICSSSM11*, 1-5, doi: 10.1109/ICSSSM.2011.5959313
- [29]. WANG, T., CHEN, T., & JIA, R. (2011). An empirical study on the effect of strategic flexibility on enterprise performance. *Chinese Journal of Management*, 8(3), 388- 395.
- [30]. WARDOYO, DEWIE TRI WIJAYATI; IRIANI, SRI SETYO; AND KAUTSAR, ACHMAD. (2018) Adoption of E-Commerce, Entrepreneurship Orientation Mediated by Business Strategy on the Performance Food Industries. *International Journal of Civil Engineering and Technology*, 9(5), 896–902.
- [31]. YANG, Z., DENG, L. J., & FANG, E. (2010). Market orientation, strategic flexibility and performance: The moderating effect of environmental uncertainty. *China Soft Science*, 46(9), 130-139.