The Role of Innovation for Knowledge Management to Predispose Business Performance of Micro, Small, and Medium Enterprise (MSME) in Semarang City during Covid-19 outbreak

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ABSTRACT
The objective of this research is to analyze the role of innovation for knowledge management to influence the MSMEs performance in Semarang City during COVID-19. This research used a Structural Equation Modeling (SEM). The primary data used in this research is collected from questionnaire. The amounts of the respondents are 176 who are the workers of MSMEs in Semarang City. The analysis tools used in this study is SPSS 23 for instrument testing and AMOS 22 for model fit, outlier evaluation, SEM assumption, and hypothesis testing. The results of this study showed that knowledge management significantly and positively influences business performance directly, knowledge management significantly and positively influences innovation directly, innovation significantly and positively influences business performance directly, and knowledge management significantly and positively influences business performance indirectly through innovation.

Keywords**:** *Knowledge Management, Innovation, Business Performance*

Peran Inovasi Knowledge Management untuk mempengaruhi Kinerja Usaha Usaha Mikro, Kecil, Dan Menengah (UMKM) di kota Semarang saat Mewabah Covid-19

Abstract
Penelitian ini bertujuan untuk menganalisis peran inovasi knowledge management dalam mempengaruhi kinerja UMKM di Kota Semarang selama masa pandemi COVID-19. Penelitian ini menggunakan Structural Equation Modelling (SEM). Data primer yang digunakan dalam penelitian ini dikumpulkan dari kuesioner. Jumlah responden sebanyak 176 orang yang merupakan pekerja UMKM di Kota Semarang. Alat analisis yang digunakan dalam penelitian ini adalah SPSS 23 untuk pengujian instrumen dan AMOS 22 untuk model fit, evaluasi outlier, asumsi SEM, dan pengujian hipotesis. Hasil penelitian ini menunjukkan bahwa knowledge management berpengaruh signifikan dan positif terhadap kinerja bisnis secara langsung, knowledge management secara langsung berpengaruh signifikan dan positif, inovasi secara langsung berpengaruh signifikan dan positif terhadap kinerja bisnis, dan knowledge management secara signifikan dan positif mempengaruhi kinerja bisnis secara tidak langsung melalui inovasi.

Keywords: *Manajemen Pengetahuan, Inovasi, Kinerja Bisnis*

INTRODUCTION

The high-level spread of COVID-19 to various countries were unavoidable in all around the world. According to Donthu & Gustafsson (2020), Liguori & Winkler (2020), and Carnevale & Hatak (2020) society was difficult to predict all of the adverse effects including the long-term economic, behavioral, and social consequences because all aspects have not been studied much in the past.

In Indonesia, one of the economic aspects that had experienced a rapid derivation in Indonesia is Micro, Small and Medium Enterprises (MSMEs). In accordance with the report of the Organization for Economic Co-operation and Development (OECD) 2021, it was stated that MSMEs and entrepreneurs were the most vulnerable parties affected by the COVID-19 pandemic. MSME workers were faced by the problem of a severe liquidity crisis through a sharp degradation in income while costs must continue to run. This risks caused many MSMEs went out of business. According to *Bank Indonesia* (2020) as many as 87.5% from 64 million MSMEs in Indonesia were affected by the COVID-19 pandemic. *Dinas Koperasi dan UMKM Republik Indonesia* (2021) also noted MSMEs Indonesia experienced around 56% reported a decrease in sales, 22% reported problems on the financing aspect, 15% reported on problems with the distribution of goods, and 4% reported difficulties in obtaining raw materials. This phenomenon cannot be ignored despite the fact that MSMEs performance always has a huge role to set the economic change. It relatively large considering that MSMEs are one of the backbones of the Indonesian economy since 1998 (Suhaili & Sugiharsono, 2019; Marlinah, 2020).

However in this outbreak era, *Dinas Koperasi dan UMKM Kota Semarang* recorded that total of MSMEs in Semarang City are increasing year by year. The data shows that MSMEs in Semarang City experiences an upsurge in the number of MSMEs every year. Total of MSMEs in 2020 exceeded the previous years and the growth rate reached 21.5%. According to *Badan Pusat Statistika Jawa Tengah* 2020 Semarang City also was in the top 5 as the city with the highest percentage of business that still doing operation during pandemic in Central Java.

The phenomenon about MSMEs performance has been discussed several times in previous studies by several researchers. Many researchers always correlate an organization or firm performance with the existence of knowledge management and innovation in the company. Previous researches had proven that there was an inconsistency between the results of one study and others. Even some of the variable elements are significant and some are not. Some like Budiprayitno (2020), Siregar (2020), Byukusenge & Munene (2017), and Samina et al (2015) accepted if knowledge management has significant and positive relationship towards business performance through the innovation. In addition, there are still a few numbers of researches on related variables during the pandemic, causing an even larger research gap and the lack of researches that examines business performance in the COVID-19 phenomenon.

The existence of this study will prove the research gap on MSMEs, especially the application of related variables in Semarang City. This research is also expected to provide new references related to COVID-19 researches. Based on the background above, the authors intent to conduct a study to MSMEs workers in Semarang City on facing this outbreak era entitled "The Role of Innovation for Knowledge Management to Predispose Business Performance of Micro, Small, And Medium Enterprise (MSME) in Semarang City during COVID-19 Outbreak".

Literature Review

Business Performance

Business is a situation where a person or group of people are busy doing work that can generate profits (Kamaluddin & Patta Rapanna, 2017). Performance can refer to the actual results or outputs of certain activities,

how an activity is carried out, or the ability to obtain results (Saunila, 2017).). Business performance is one of achievement measurements of a business gained through the overall production and marketing activities that come from business organizations (Fauni et al., 2017). produced by a business organization.

According to the book of Business Performance Measurement: Theory and Practices by Neely in Shouyu (2017) and Fauni et al (2017), which is measured empirically with previous findings by many discussion of authors, measuring performance can be divided into Accounting Perspectives, Marketing Perspectives, and the Operational Perspectives.

Innovation

Innovation is mainly applied in business and as a key of business itself (Tavassoli, 2018). Tanye (2016) also noted the definition of innovation in research based on Roger in Tanye (2016), and Zastempowski & Przybylska (2016). Innovation according to Roger in Tanye (2016) is defined as a research, development, or engineering activity that aims to develop the practical application of new scientific values and contexts, or new ways to apply existing science and technology into products. or production process.

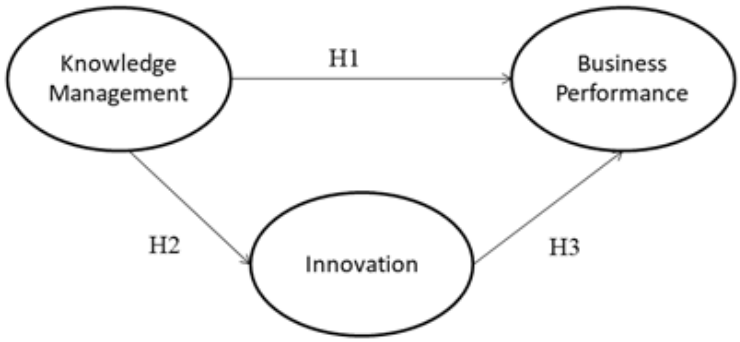
According to Tanye (2016), explanation about types of innovations are Product Innovation, Process Innovation, Organizational Innovation, and Marketing Innovation.

Knowledge Management

Alavi and Leidner in (Acar et al., 2017) defined knowledge as information possessed in the mind of individuals: it is personalized information which may or may not be new, unique, useful or accurate related to facts, procedures, concepts, interpretations, ideas, observations, and judgments. Then, management can be defined as the process of achieving organizational goals through. planning, organizing, leading, and controlling the human, physical, financial, and information. resources of the organization in an effective and efficient manner (Bovée et al in (Kaehler & Grundei, 2019).

According to Al-Shanti (2017) believes knowledge manageme enables the employees of the organization to carry out continuous activities and studies aimed at acquiring knowledge, storing, distributing and applying knowledge to achieve outstanding performance. According to Nonaka and Takeuci in Siregar (2020), process of knowledge management can be divided as Socialization Process, Externalization Process, Combination Process, and Internalization Process as known as SECI Methode.

Theoretical Framework and Hypothesis



Source: Siregar et al (2020); Saraswati (2019); Helmi et al (2016); Samina et al (2015)

Figure 1. Theoretical Framework

H1: Knowledge Management has positive and significant impact on Business Performance of Semarang MSMEs.
H2: Knowledge Management has positive and significant impact on Innovation.
H3: Innovation has positive and significant impact on Business Performance of Semarang MSMEs.

RESEARCH METHOD

Participant

The samples of this study are the workers of 176 MSMEs including experienced the influence of knowledge management and innovation at their MSMEs business performance during the COVID-19 outbreak using probability sampling method. This study is regarding to the distributed questionnaires results.

Measures

Table 1. Measurement

Variable	Indicator	Scale
Knowledge Management	Siregar (2020) 1. Socialization Process (KM1) 2. Externalization Process (KM2) 3. Combination Process (KM3) 4. Internalization Process (KM4)	1-5 approach (strongly disagree-strongly agree)
Innovation	Tanye (2016) 1. Product Innovation (IN1) 2. Process Innovation (IN2) 3. Organizational Innovation (IN3) 4. Marketing Innovation (IN4)	1-5 approach (strongly disagree-strongly agree)
Business Performance	Fauni et al (2017) 1. Accounting Perspectives (BP1) 2. Marketing Perspectives (BP2) 3. Operational Performances (BP3)	1-5 approach (strongly disagree-strongly agree)

Source: Siregar et al. (2020), Fauni et al. (2017), Tanye (2016)

RESULT AND DISCUSSION

This study is using Structural Equation Modeling (SEM) Analysis. It will explain about the data analysis which is carried out in this study including respondent characteristic analysis, instrument testing, outlier evaluation testing, assumption testing, model fit testing, and hypothesis testing. Characteristic analysis and instrument testing use SPSS 23, meanwhile model fit, assumption, and hypothesis testing use AMOS 22.

Respondent Characteristics

It can be concluded that the percentage results of gender, age, sort of business and number of employees of MSMEs in Semarang City are obtained. The percentage of gender is dominated by women as many as 119 woman or 76% of total respondents. The percentage of age is dominated by 20-29 years old as many as 51 people or 29% of total respondents. The percentage of sort of business is dominated by food/beverage as many as 44 MSMEs or 25% of total respondents. The last is percentage of total of employees which is dominated by 5-10 people as many as 99 MSMEs or 56% of total respondents.

Respondents Perception Analysis

According to Loading Factor of each variable, it can be concluded all indicators in knowledge management variable are strong

indicator. KM3 is the most priority indicator that can improve or support knowledge management process in a MSMEs which is proven by its loading factor as many as 0.795. To maximize the impact of knowledge management on innovation and business performance, the KM3 indicator must be maximized. IN1 is the most priority indicator that can improve or support innovation process in a MSMEs which is proven by its loading factor as many as 0.829. To maximize the impact of innovation on business performance, the IN1 indicator must be maximized. BP3 is the most priority indicator of business performance process in a MSMEs which is proven by its loading factor as many as 0.762. It means most of MSMEs accept if each MSME experienced BP3.

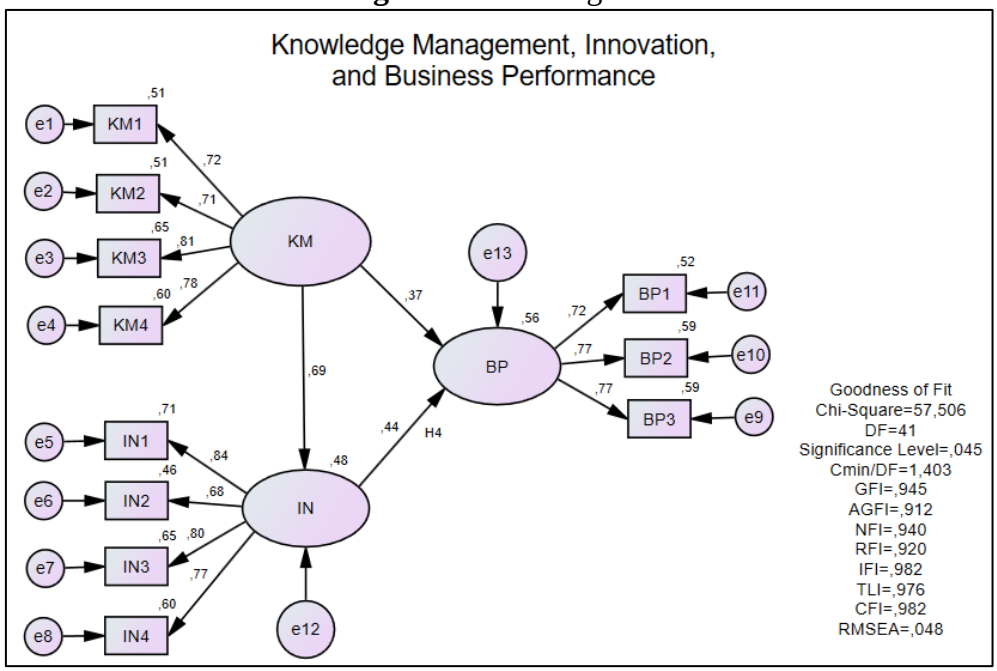
Instrument Testing

This study conducted a pretest by testing the questionnaire on 30 respondents first to determine whether the questionnaire instrument had met the requirements or not. An instrument is said to be valid if the value of $r_{count} > r_{table}$. The value of r_{table} for 30 respondents with a significance of 5% and df = 28 is 0.361. All indicators are **Valid**. Meanwhile, reliability testing. A variable can be declared reliable if the Cronbach Alpha value is above 0.70 (Ghozali, 2018). It can be concluded that ll indicators are **Reliable**.

Path Analysis

The path diagram of path analysis can be seen in Figure 2.

Figure 2. Path Diagram



Source: Primary Data Processed, 2021

A structural equation is formulated to express causality or cause and effect relationships between variables

IN = 0.69KM

BP = 0.37KM + 0.44IN

Where:

KM = Knowledge Management

IN = Innovation

BP = Business Performance

Outlier Testing

The value of the mahalanobis distance is compared with the chi-square value. If there is a value of mahalanobis distance, it means that there is a multivariate outlier problem (Waluyo, 2016). Based on the data result, chi-square value in this research was obtained 57.50 and the largest value in multivariate mahalanobis was at 43.62 at respondent number 118. Therefore, it can be concluded that in this study there is no multivariate outlier problem. It means that the data is feasible to use.

Normality Testing

Evaluation of the normality of the data is carried out using the critical ratio skewness value of ± 2.58 at a significance level of 0.01 (1%) (Hair et al., 2018). The result of normality testing in this study can be seen before and after data transforming as Table 2.

Table 2. Normality Testing Result

Variable	C.R Skew (before)	C.R. Skew (after)
KM4	-3,956	1,604
IN4	-4,084	1,554
BP3	-5,048	2,231
IN3	-4,551	2,191
BP1	-3,407	1,213
BP2	-5,241	2,519
IN1	-2,780	,969
IN2	-3,781	1,123
KM3	-2,030	,210
KM2	-2,510	,466
KM1	-3,030	,467

Source: Primary Data Processed, 2021

After the data was trimmed by moderate negative skewness which X=lg10(K-X) the data is **normal** in distribution. According to Table, it can be concluded that all indicators variable are approved in normality testing because the critical ratio skewness value is between ± 2.58.

Multicollinearity Testing

The multicollinearity and singularity can be proven by the result of sample moment in AMOS 23. The determinant of sample covariance matrix of 0.000 is close to zero. Thus, it can be concluded that there is no multicollinearity and singularity in the data of this study, however, it is still acceptable because the other SEM assumptions are fulfilled and accepted (S. Haryono, 2015).

Model Fit Testing

The Goodness of Fit testing is a statistical hypothesis testing to see how well sample data fit a distribution from a population with a normal distribution (Waluyo, 2016). The result of Goodness of Fit can be seen in Table 3.

Table 3. Goodness of Fit Analysis

Index	Cut of Value	Analysis Value	Result
Chi Square	≤ 57.51	57.50	Good Fit
Probability	≥ 0.05	0.045	Good Fit
CMIN/DF	≤ 2	1.403	Good Fit
GFI	≥ 0.90	0.945	Good Fit
AGFI	≥ 0.90	0.912	Good Fit
NFI	≥ 0.90	0.940	Good Fit
RFI	≥ 0.90	0.920	Good Fit
IFI	≥ 0.90	0.982	Good Fit
TLI	≥ 0.90	0.976	Good Fit
CFI	≥ 0.90	0.982	Good Fit
RMSEA	≤ 0.1	0.048	Good Fit

Source: Primary Data Process, 2021

From Table 3, it can be concluded that the test results against the Goodness of Fit criteria show that all index are well accepted in Goodness of Fit Testing.

Hypothesis Testing

The interpretation of the results obtained in the form of acceptance of all hypotheses is accepted if the value of $\beta > 0$, where is the value of the estimate parameter and the value of probability < 0.05 and C.R > 1.96 (Waluyo, 2016). The hypothesis of this study can be determined as Table 4

Table 4. Regression Weights Result

			Estimate	S.E.	C.R.	P	Label
IN	<---	KM	,557	,085	6,523	***	H2
BP	<---	KM	,375	,117	3,197	,001	H1
BP	<---	IN	,554	,149	3,726	***	H3

Source: Primary Data Processed, 2021

From Table 4 it can be concluded that H1 is accepted because knowledge management significantly influence business performance with probability value is 0.001 < 0.05, H2 is accepted because knowledge management significantly influence innovation because probability value is 0.000 < 0.05, and H3 is accepted because innovation significantly influence business performance because probability value is 0.000 < 0.05.

To prove the positive or negative impacts in hypothesis, it can be tested by direct, indirect, and total effects from estimates standardized tables at AMOS 22. The direct, indirect, and total effects in this study are shown as Table 5.

Table 5. Direct, Indirect and Total Effects

Effect on Endogenous Variable	Direct Effect	Indirect Effect	Total Effect
Effect on Innovation			
H2. Knowledge Management	0.691	-	0.691
Effect on Business Performance			
H1. Knowledge Management	0.372	0.306	0.679
H3. Innovation	0.443	-	0.443

Source: Primary Data Processed, 2021

This section will explain about the discussion of research topic based on the testing result. The discussion can be described as follows

H1. The influence of Knowledge Management to Business Performance

Hypothesis 1 is accepted based on Table 5.9 which is mentioned that hypothesis is accepted when value of probability < 0.05 and C.R > 1.96 (Waluyo, 2016). The probability value of knowledge management to business performance is 0.01 < 0.05 and C.R is 3.197 > 1.96. Table 5.10 also gives the provement if knowledge management has direct and indirect effect towards business performance. It can be concluded that knowledge management has a significant and positive influence to business performance directly as many as 0.372 and indirectly as many as 0.679 through innovation.

H2. The influence of Knowledge Management to Innovation

Hypothesis 2 is accepted based on Table 5.9 which is mentioned that hypothesis is accepted when value of probability < 0.05 and C.R > 1.96 (Waluyo, 2016). The probability value of knowledge management to innovation is 0.00 < 0.05 and C.R is 6.523 > 1.96. Based on Table 5.10, knowledge management has a significant and positive influence to innovation directly as many as 0.691.

H3. The influence of Innovation to Business Performance

Hypothesis 3 is accepted based on Table 5.9 which is mentioned that hypothesis is accepted when value of probability < 0.05 and C.R > 1.96 (Waluyo, 2016). The probability value of innovation to business performance is 0.00 < 0.05 and C.R is 3.726 > 1.96. Based on Table 5.10, innovation has a significant and positive influence to business performance directly as many as 0.443.

Recommendation

The recommendations for MSMEs in Semarang City which are grouped into the following points:

a. Innovation
   Recommendation for innovation in MSMEs in Semarang City such as improving business performance is optimizing Product Innovation (IN1). To improve and optimize business performance in COVID-19 outbreak, MSMEs in Semarang City are expected to create a variety of new products that suit or fit with the needs of the market share, especially products that match the needs of this COVID-19 outbreak according to interview result.
b. Knowledge Management
   Recommendation for MSMEs to improve performance and innovation through knowledge management is optimizing Combination Process (KM3). To improve and optimize

innovation or business performance in COVID-19 outbreak, MSMEs in Semarang City in all sectors are expected to better combine knowledge or information from workers so that workers can conclude some of information and create it into new knowledge that may be needed in the future. The example such as improving discussion and make it more often and make it to be a database in making decision.

This research has several limitations which are expected to be developed in future research. The following are limitations and suggestions for further research:

a. There is still multicollinearity in this study, future researcher can examine this study to make it more comprehensive in accodance with Hair et al. (2018) to remove the multicollinerity of data such as increasing the number of samples or enlarging the measuring scale.
b. This study only examines the influence of the variables of knowledge management, innovation, and business performance directly or indirectly. Based on the findings obtained in this study, it is interesting to investigate further about the role of knowledge management and innovation on company performance in other aspects such as organizational productivity (Torabi & El-Den, 2017).
c. The object of this research is MSMEs in the city of Semarang. Future research is expected to be able to use objects on other location or city in Indonesia or especially in Central Java.

CONCLUSION

Structural Equation Modeling (SEM) is a multivariate analysis technique developed to cover the limitations of analytical models that have been widely used in statistical research. Multivariate analysis techniques are used because it canenable organizations to create knowledge and thereby improve their decision-making (Hair et al., 2018). Multivariate analysis refers to all statistical techniques that simultaneously analyze multiple measurements on individuals or objects under investigation. Thus, any simultaneous analysis of more than two variables can be loosely considered multivariate analysis Based on the results of research that has been done regarding the role of innovation on knowledge management in influencing business performance during COVID-19 outbreak. Then the following conclusions can be concluded:

1. There are some data in multicollinearity and singularity testing are not accepted. But, the model fit of this research is all good which means the distribution of data in this research can be accepted (Hair et al. in Waluyo, 2016).
2. According to hypothesis testing, all hypothesis are accepted. Knowledge management gives significant and positive influence to business performance directly, knowledge management gives significant and positive influence to innovation directly, innovation gives significant and positive influence to innovation directly, and knowledge management gives significant and positive influence to business performance indirectly through innovation.

BIBLIOGRAPHY

Acar, M. F., Tarim, M., Zaim, H., Zaim, S., & Delen, D. (2017). Knowledge management and ERP: Complementary or contradictory? *International Journal of Information Management, 37*(6), 703–712. https://doi.org/10.1016/j.ijinfomgt.2017.05.007

Al-Shanti, M. A. (2017). The role of

transformational leadership on the knowledge managemeSnt: An applied study on the employees in the Palestinian interior ministry-Gaza strip. The Jordan Journal of Business Administration, 13(3), 435-459.

Ferdinand, Augusty. (2014). Metode Penelitian Manajemen. BP Universitas. Diponegoro. Semarang

Badan Pusat Statistika. (2021). Located at https://semarangkota.bps.go.id/ (site last viewed on Augustust 31, 2021)

Bank Indonesia. (2015). *Profil Bisnis Usaha Mikro Kecil dan Menengah.* Located at bi.go.id (site last viewed on June 18, 2021)

Budiprayitno, S. (2020). The Effect of Knowledge Management on Innovation and Organizational Performance in the field of Application and Game Development. *MEC-J (Management and Economics Journal)*, *4*(2), 185–200. https://doi.org/10.18860/mec-j.v4i2.8448

Byukusenge, E., & Munene, J. C. (2017). Knowledge management and business performance: Does innovation matter? *Cogent Business & Management*, *4*(1), 1368434. https://doi.org/10.1080/23311975.2017.1368434

Carnevale, J. B., & Hatak, I. (2020). Employee adjustment and well-being in the era of COVID-19: Implications for human resource management. *Journal of Business Research*, *116*, 183–187. https://doi.org/10.1016/j.jbusres.2020.05.037

Dinas Koperasi dan UMKM. Located at https://diskopumkm.semarangkota.go.id/ (site last viewed on Augustust 31, 2021)

Dinas Koperasi dan UMKM. Located at https://dinkop-umkm.jatengprov.go.id/ (site last viewed on Augustust 31, 2021)

Donthu, N., & Gustafsson, A. (2020). Effects of COVID-19 on business and research. *Journal of Business Research, 117*(June), 284–289. https://doi.org/10.1016/j.jbusres.2020.06.008

Fauni, A. M., Wahyudin, A., & Semarang, U. N. (2017). Factors Influencing The Business Performance of SMES Convections in Kudus. *Journal of Economic Education*, *6*(2), 124–133. https://doi.org/10.15294/jeec.v6i2.19298

Ferdinand, A. (2014). *Metode Penelitian Manajemen edisi kelima*. *Badan Penerbit Universitas Diponegoro, Semarang*.

Ghozali, Imam. (2015). *Aplikasi Analisis Multivariate dengan Program* IBM SPSS 23. Semarang : *Badan Penerbit Universitas Diponegoro*

Ghozali, Imam. 2016. *Aplikasi Analisis Multivariete Dengan Program IBM SPSS 23 (Edisi 8). Cetakan ke VIII*. Semarang : *Badan Penerbit Universitas Diponegoro*

Ghozali, Imam. (2018). *Aplikasi Analisis Multivariate dengan Program IBM SPSS* 25. Semarang: *Badan Penerbit Universitas Diponegoro*

Hair et. al (2014). Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. European Business Review Vol. 26 No. 2, 2014 pp. 106-121. Retrieved from: http://www.emeraldinsight.com/doi/abs/10.1108/EBR-10-2013-0128

Helmi, R. L. (2020). Knowledge Management Enabler (KME) to Promote Innovation Capabilities in Public R&D Centers in Indonesia. *The Asian Journal of Technology Management (AJTM)*, *13*(2), 98–112. https://doi.org/10.12695/ajtm.2020.13.2.1

Kaehler, B., & Grundei, J. (2019). HR Governance A Theoretical Introduction. *Researchgate*, *2019*(July 2018), 1–29.

Kamaluddin, I. H. A., & Patta Rapanna, S. (2017). *Administrasi Bisnis* (Vol. 1): Sah Media.

Marlinah, L. (2020). *Peluang dan Tantangan UMKM Dalam Upaya Memperkuat Perekonomian Nasional Tahun 2020 Ditengah Pandemi Covid 19*. *Jurnal*

Ekonomi, *22*(2), 118–124.

Nonaka, I., Toyama, R. & Konno, N. (2000). SECI, Ba and Leadership: A Unified Model of Dynamic Knowledge Creation. Long Range Planning, 33(1), 5-34.

S. Haryono Prof. Dr. H. MM, M.Pd., Parwoto Wardoyo, ST, M. (2015). Structural Equation Modeling Untuk Penelitian Manajemen Menggunakan AMOS 18. In *Dictionary of Statistics & Methodology*. https://doi.org/10.4135/9781412983907.n1909

Samina, N., Nazir, T., Zahid, M., & Fawad, S. (2015). Knowledge Management, Innovation and Organizational Performance. *International Journal of Knowledge Engineering-IACSIT*, *1*, 43–48. https://doi.org/10.7763/IJKE.2015.V1.7

Saraswati, A. (2019). Implementation of Knowledge Management On Organizational Performance Through Innovation (Case Study on Digital Creative MSME in Semarang, Indonesia). *... International Conference on Indonesian Social & ...*, *366*(Icispe 2018), 1–5. https://www.atlantis-press.com/proceedings/icispe-18/125921238

Saunila, M. (2017). Understanding innovation performance measurement in SMEs. *Measuring Business Excellence*, *21*, 1–16. https://doi.org/10.1108/MBE-01-2016-0005

Siregar, Z. M. E., Suryana, Ahman, E., & Senen, S. H. (2020). Knowledge management, innovation, and firm performance: The case of Batik industry in Indonesia. *Quality - Access to Success*, *21*(179), 27–32.

Sugiyono. (2014). *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif Dan R&D*. Bandung: Alfabeta.

Sugiyono. (2017). *Metode Penelitian Bisnis: Pendekatan Kuantitatif, Kualitatif, Kombinasi, dan R&D*. *Penerbit CV. Alfabeta: Bandung*.

Suhaili, M., & Sugiharsono, S. (2019). Role of MSME in Absorbing Labor and Contribution to GDP. *Economics Development Analysis Journal*, *8*(3), 301–315. https://doi.org/10.15294/edaj.v8i3.35229

Tanye, H. A. (2016). Perceived Attributes of Innovation: Perceived Security as an Additional Attribute to Roger's Diffusion of Innovation Theory. *International Journal of Multicultural and Multireligious Understanding*, *3*(6), 6. https://doi.org/10.18415/ijmmu.v3i6.57

Tavassoli, S. (2018). The role of product innovation on export behavior of firms: Is it innovation input or innovation output that matters? *European Journal of Innovation Management*, *21*(2), 294–314. https://doi.org/10.1108/EJIM-12-2016-0124

Torabi, F., & El-Den, J. (2017). The impact of Knowledge Management on Organizational Productivity: A Case Study on Koosar Bank of Iran. *Procedia Computer Science*, *124*, 300–310. https://doi.org/10.1016/j.procs.2017.12.159

Zastempowski, M., & Przybylska, N. (2016). Cooperation in Creating Innovation in Polish Small and Medium-Sized Enterprises in the Light of Empirical Studies. *Journal of Competitiveness*, *8*, 42–58. https://doi.org/10.7441/joc.2016.02.04