International Journal of Psychosocial Rehabilitation, Vol. 24, Issue 2, 2020
ISSN: 1475-7192

Analysis Determinant Factors of Innovation Speed in SMEs Manufacturing

Didi Tarmidi[1*], Fansuri Munawar[2,] R Susanto Hendiarto[3], Zahera Mega Utama[4], Dewi Utami Saptaningrum[5]

Abstract---*This study aims to analyze the role of innovation collaboration, management support, and knowledge sharing as factors suspected to increase innovation speed in SMEs manufacturing. This study took a sample of SMEs manufacturing, which consisted of five main industrial categories, namely textile industry, handicraft industry, shoe & bag industry, food& beverage industry, and various industries. Sampling was carried out on 100 owners or managers of SME manufacturing in Bandung and surrounding areas because the area is one of the centers of SME manufacturing in West Java. Data analysis in this study used a structural equation model based on partial least square (SEM-PLS). The results of testing of the research hypothesis show that the variables of innovation collaboration and management support have a positive and significant effect on innovation speed, but the variable of knowledge sharing does not have a positive and significant impact on innovation speed. Research implication to the owner or manager to utilize innovation collaboration with external partners, especially the collaboration with consumers. In addition, it is expected that the owner or manager can create a work atmosphere that supports innovation.*

Keywords---*Innovation collaboration, management support, knowledge sharing, innovation speed*

I. INTRODUCTION

The role of micro, small and medium enterprises has become one of the mainstays in increasing economic growth in Indonesia. Based on data from the Ministry of Cooperatives and SMEs in 2017, the number of workers in the micro business sector is 107.2 million people, then the small business sector is 5.7 million people, while the medium business sector is 3.7 million people (Depkop, 2018). However, based on data from BPS West Java Province in 2019, the percentage of production growth in manufacturing SMEs in West Java has decreased year-on-year (BPS, 2019). Table 1.1 shows the growth of production of manufacturing SMEs in the province of West Java in 2018.

Kode KBLI	Kategori Manufaktur	Pertumbuhan Produksi *Year-On Year* (%)
11	Industri minuman	-19,97
10	Industri makanan	-7,77
13	Industri tekstil	-3,29

[1,2 &3] *Widyatama University, Indonesia*
[4] *Prof. Dr.Moestopo (Beragama) University, Indonesia*
[5] *STIE Santa Ursula, Indonesia*
[*] *(didi.tarmidi@widyatama.ac.id)*

31	Industri furniture	-0,47
17	Industri kertas	-12,72
22	Industri karet dan plastik	-7,64

Source : Badan Pusat Stastistik No. 10/02/32/Th. XXI, 1 Februari 2019

Table 1 shows that there are six categories of manufacturing that experienced negative growth. The highest decrease was found in the beverage industry, while the lowest decline was in the furniture industry. Based on the results of the pre-survey conducted by the author in 2018 of 30 manufacturing SMEs in Bandung, explained that there are major obstacles in reducing the level of production growth in manufacturing SMEs, including low levels of innovation, less skilled labor and low support of business managers. In line with this, Martowardojo (2016) explains that the quality of human resources and technical and non-technical skills in manufacturing SMEs is still weak, the development of new products is still limited to those already on the market, and innovation is low. This causes the slow pace of innovation. In addition, Rizal (2014) stated that the main obstacle of manufacturing SMEs today is the lack of application of technology and the acceleration of innovation in the development of new products that lead to the low performance of marketed products. Basically, these constraints become a classic problem for manufacturing SMEs, which often have difficulty facing the expansion of large companies, if there is no speed of innovation for manufacturing SMEs, then sooner or later the business will die, or at least it will be difficult to develop. Therefore, the author tries to propose several factors that are suspected to increase the speed of innovation in manufacturing SMEs based on the results of the study in previous studies. These factors include innovation collaboration, management support, and knowledge sharing.

Innovation collaboration as a relationship of interaction between industries and different collaborators, such as suppliers, customers, universities, and competitors that aim to innovate together by combining the strength of resources and capabilities (Kang & Kang, 2010). Then, management support refers to the amount of support given by management in developing new products (Carbonell & Rodríguez-Escudero, 2009). Furthermore, knowledge sharing refers to the availability of information and knowledge to support and cooperate among company members in solving problems, obtaining new ideas, or implementing new methods (Wang & Noe, 2010).

The purpose of this study is to address problems in improving the speed of innovation in manufacturing SMEs through collaborative innovation, management support, and knowledge sharing. In addition, this research is also to fill the research gap where the role of innovation collaboration, management support and knowledge sharing on the speed of innovation is still little done in manufacturing SMEs in Indonesia. Therefore, the formulation of the problems in this study include: Does innovation collaboration have a positive effect on the speed of innovation in manufacturing SMEs? Does management support have a positive effect on the speed of innovation in manufacturing SMEs? Does sharing knowledge positively influence the speed of innovation? Answering these questions is important for manufacturing SMEs, especially in developing countries like Indonesia to improve business growth in the future.

II. THEORETICAL FRAMEWORK AND FORMULATION OF HYPOTHESES

1. Coloration Innovation

Innovation collaboration is defined to the extent of collaboration with partners in the development of innovation processes and new products (Tsai, 2009). Innovative collaboration can increase the ease of external resources, help exchange knowledge, reduce risk in product development activities, and share costs with partners (Yan & Dooley, 2014). Innovation collaboration with suppliers can increase direct interaction so as to increase trust between the two parties and facilitate the exchange of information and knowledge between companies (Luzzini, Amann, Caniato, Essig, & Ronchi, 2015). Collaboration with potential customers is able to identify customer needs that are not met and not realized, so the company is able to offer superior products to customers (Hoyer, Chandy, Dorotic, Krafft, & Singh, 2010). Collaboration with competitors aims to reduce the negative impact of competition and improve information sharing between the two parties so that it is expected to produce better innovation capabilities for the industry (Wu, 2014). Collaboration with universities is useful as a source of knowledge with a relatively lower risk when compared to collaborating with other partners and is useful for the industry for the development of long-term research (Brettel & Cleven, 2011). The ability of companies to utilize knowledge and information from innovation collaboration with partners can determine the level of innovation, such as new solutions and speed of innovation as a reaction to changing market demand (Du Plessis, 2007), so that innovation collaboration can increase the speed of innovation (Kang & Kang, 2010).

2. Management Support

Management support refers to management interest and involvement inthe development of new innovations (Larson & Gray, 2014). Every innovation requires management support with financial assistance and appropriate resources (Cooper & Edgett, 2004), meaning that companies need support from management by helping to solve problems, build cooperation and smooth communication within the company (Rodríguez, Pérez, & Gutiérrez, 2008). When the marketing department and the production department feel the involvement of management in product development, they are more enthusiastic, interested, coordinated, and more willing to bear the risk of the innovation process (Swink, 2000). Thus, management support can foster a good work environment and maintain an effective internal relationship between marketing and production (Boyle, Kumar, & Kumar, 2005). According to Rice, Connor, & Pierantozzi (2008) states that early management support for innovation can accelerate products entering the market and increase the effectiveness of resource use. Thus, management support can positively increase the speed of innovation (Hamdi et al., 2016).

3. Knowledge sharing

Knowledge sharing is defined as the act of sharing information related to tasks, suggestions and expertise to help and work together with others to handle daily tasks, solve problems and develop new thinking (Ahmad & Karim, 2019). In addition, knowledge sharing is an important factor for organizational members to contribute to innovation, knowledge and excellence for the company. This makes it possible for all employees in the company to share knowledge by utilizing knowledge-based resources for mutual progress. Then, previous studies have explained that sharing knowledge contributes to the reduction of production costs, faster development of new products, better innovation capabilities, and sales growth of new products (Wang & Noe, 2010; Wang & Wang, 2012).

4. The speed of innovation

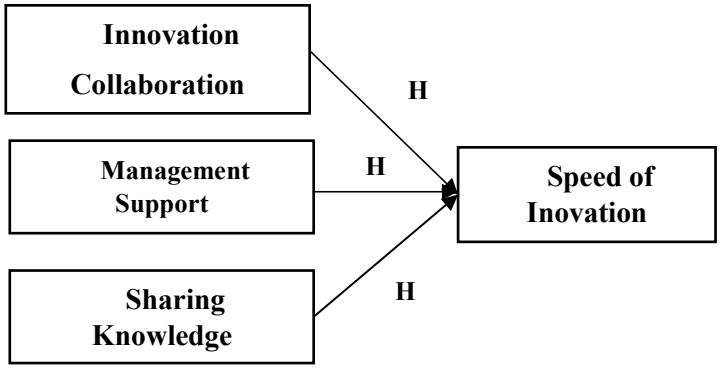
The speed of innovation is increasingly important to be applied for companies because at this time the reduced life cycle of the product life and increased competition caused by technological developments and globalization (Chen, Damanpour, & Reilly, 2010). The speed of innovation is described as the company's ability to accelerate the process of developing new

products (Chen, Reilly, & Lynn, 2005). In today's business competition, the product life cycle from growth to decline is increasingly short, competition is increasing, and the business environment is volatile, so the speed of innovation becomes very important for the company (Shan, Song, & Ju, 2016). The speed of innovation is able to respond to rapid changes in the market environment by providing high value for low costs and short time (Chen et al., 2010; Shan et al., 2016).

5. Framework

Based on previous research conducted by Kang & Kang (2010), Hamdi et al. (2016), and Wang & Wang (2012) there is a framework that can be used as a model in this study. Figure 1 shows the model developed for this study

Figure 1: Research Model



Based on Figure 1 there are three independent variables and one dependent variable. The independent variables are Collaboration Innovation (X1), Management Support (X2), and Knowledge Sharing (X3). Whereas the dependent variable is Speed of Innovation (Y).

6. Hypotesis Formulation

Based on the research model obtained from the framework of thought and literature study, it was hypothesized as follows:

First Hypothesis:

H1: Collaborative innovation can positively increase the speed of innovation

Second Hypothesis:

H2: Management support can positively influence the speed of innovation

Third Hypothesis:

H3: Sharing knowledge positively can affect the speed of innovation

III. RESEARCH METHODS

1. Population and Research Samples

The data source in this study uses primary data, therefore respondents are asked to fill in a number of questions raised on the research instrument. The respondents in this study were owners or managers of Manufacturing SMEs in Bandung. The target population area is the Bandung area and its surroundings because the area is the center of Manufacturing SMEs in West Java. Based on data from the Department of Industry and Trade of West Java Province obtained in 2019 for the entire population of Manufacturing SMEs in the Bandung area there are 10,757 units consisting of 5 (five) main industry categories, including the textile industry, handicraft industry, footwear & bag industry, food and beverage industry, and various industries.

The sample size in this study refers to Ghozali which states that the number of samples can be calculated from the magnitude of the parameters multiplied by 5 to 10 (Ghozali, 2011). In addition, the sample calculation is taken from the Slovin formula so that the sampling is more representative and the results of the study can be generalized to the entire population.

$$\text{Rumus Slovin (n)} = \frac{N}{1+N(e)^2}$$

$$n = \frac{10757}{1+10757(0,1)^2}$$

$n = 99,0789 \approx 100$ sampel

2. Instruments and Measurements

The research instrument consisted of four questionnaire sections adjusted from various sources to gather information on demographics and business characteristics of the respondent's biodata filling instrument, then to fill in the collaboration collaboration variables, support for management, knowledge sharing, and speed of innovation contained in the variable filling instrument. The five-point Likert scale, indicated by strongly disagreeing to strongly agree (1 = strongly disagree, 5 = strongly agree), is used to measure the construction of the study. The construction of new product performance items was also evaluated using a five-point Likert scale (1 = significantly decreased; 5 = significantly higher).

Furthermore, testing the measurements for factor weights, testing the validity and reliability using factor weights and Cronbach's alpha. Factor weight aims to provide confidence that each question item is arranged according to the variable. The next process is by testing the construct reliability and average variance extracted or AVE.

3. Descriptive Analysis

Descriptive analysis aims to describe the profile of respondents' data and their research variables. Presentation of data through descriptive analysis of respondent data can be explained in terms of frequency and percentage. The interval data is explained based on the average value and standard deviation. Descriptive statistics on research variables can be explained based on average values and theoretical and actual ranges.

4. Processing and data analysis

After the data has been collected, the next process will be processing and analyzing the data. Data processing is generally carried out through data elimination where if there is incomplete data it will be separated, and then code the data and tabulate the data. In conducting the data analysis process, the question items that have been answered by the respondent must be checked again whether there are questions missed by respondents. This is because the data that will be

used for the analysis process is complete data and does not miss the contents of the question items contained in the research instrument. After the data goes through these processes, it can fill data (data entry) so that it can be processed through the help of statistical programs. The data processing is done by utilizing several statistical program applications such as SPSS 23.0 and SmartPLS 3.0.

Furthermore, the method in analyzing the data of this study uses a partial least square (PLS) structural equation model. Partial least square analysis method is analysis of variance-based structural equation models which can simultaneously assess the measurement model and also assess its structural model. The measurement model is useful for testing the validity and reliability in research, while the structural model is applied to test causality (measurement of the hypothesis using predictive models). Ghozali (2011) states that PLS analysis is a process of analyzing data that is soft modeling that does not assume data on a certain scale size, so the number of samples does not have to be large.

Data analysis procedures in this study are divided into 2 namely: descriptive analysis which aims to see the profile of respondents' data and research variables. Descriptive analysis of respondents' data profiles is illustrated through frequency and percentage. While the interval data is illustrated through the average value and standard deviation. Descriptive analysis of research variables can also be described as averages, theoretical and concrete ranges, means, and standard deviations. Inferential statistical analysis is tested by utilizing the SmartPLS software application version 3.0 which starts from the measurement of structural models to testing the hypothesis.

IV. RESULTS AND DISCUSSION

1. Data Responden

Based on the results of data on respondents, a summary of the characteristics obtained, descriptive analysis and analysis of the relationship between variables using structural equation-partial least square (SEM-PLS). Table 2 shows the respondents' data based on gender, length of operation of the company, number of employees, products produced, and total sales of new products. Based on the respondents' data it can be concluded that the majority of owners or managers of manufacturing SMEs are men (75%), then the company has been operating for between 5-10 years (32%). Furthermore, the majority of respondents have the number of employees under 5 people (46%), the majority of manufactured products are crafts and furniture (38%), the last is the number of new product sales per year is at most 1000-2000 units (30%).

Tabel 2: Data Responden

Profil Responden	**Jumlah**	**Pesentase**
Jenis Kelamin:		
Pria	75	75.0
Wanita	25	25.0
Lama Beroperasi:		
2-5 Tahun	16	16.0
5-10 tahun	32	32.0

11-20 tahun	28	28.0
21-30 tahun	18	18.0
>30 tahun	6	6.0
Jumlah Karyawan:		
<5 orang	46	46.0
5-10 orang	30	30.0
Profil Responden	**Jumlah**	**Pesentase**
11-20 orang	16	16.0
21-30 orang	4	4.0
>30 orang	4	4.0
Produk yang dihasilkan:		
Sepatu & Tas	18	18.0
Tekstil	14	14.0
Kerajinan & Furnitur	38	38.0
Makanan & Minuman	12	12.0
Aneka	18	18.0
Penjulan produk baru per thn:		
< 500 unit	20	20.0
500-1000 unit	18	18.0
1000-2000 unit	30	30.0
2000-3000 unit	8	8.0
>3000 unit	24	24.0

2. Descriptive Analysis

Next Table 3 shows a descriptive analysis of the research variables showing that the owner or manager of manufacturing SMEs gave high scores to the variables of management support, knowledge sharing and speed of innovation with values of 4.04, 4.27 and 3.56, respectively. However, this score is inversely proportional to the innovation collaboration variable which has a low average score, this is evidenced by a value of 2.41. This explains that the

application of innovation collaboration in manufacturing SMEs has not yet been maximized, meaning that the owners or managers of manufacturing SMEs have not been able to implement innovation collaboration well.

Table 3: Descriptive Analysis of the Research Variables

Variabel	Skor Rata-Rata
Kolaborasi Inovasi	2.41
Dukungan Manajemen	4.04
Berbagi Pengetahuan	4.27
Kecepatan Berinovasi	3.56

3. Validity Test

Validity test measurement whether the research instrument is valid or not. This test is carried out using the SmartPLS 3.0 application program by demonstrating convergent validity (See Table 4). The variables adopted in this study consisted of innovation collaboration, management support and knowledge sharing as independent variables; while the dependent variable is speed of innovation. The measurement of the validity of each variable is based on the evaluation of the cross-loading factor using convergent validity. Each factor weight must be greater than 0.5. Based on the results of the validity test, all indicators of innovation collaboration, management support, knowledge sharing and speed of innovation have a factor containing an estimated value greater than 0.5 and a t-statistic value greater than t-table (1.97). Table 4 also shows the convergence of validity of each variable. This can be shown by the mean value of extracted variance (AVE) for all constructs of variables greater than 0.5. This means that all variables are valid and can be continued for the next process.

Table 4: Test Validity

Konstruk	Bobot Faktor	t-statistik (t-tabel=1.97)	Deksripsi
Kolaborasi Inovasi (AVE=0.701)			
Kolaborasi inovasi dengan pemasok	0.831	16.562	Valid
Kolaborasi inovasi dengan konsumen	0.846	32.989	Valid
Kolaborasi inovasi denganpesaing	0.833	21.800	Valid
Kolaborasi inovasi dengan mitra lainnya	0.839	20.334	Valid
Dukungan Manajemen (AVE=0.738)			
Waktu yang disediakan untuk inovasi	0.883	19.573	Valid
Tenaga dan pikiran yang dihabiskan untuk inovasi	0.855	15.845	Valid
Biaya yang dikeluarkan untuk inovasi	0.924	40.254	Valid
Atmosfir kerja yang mendukung inovasi	0.805	8.685	Valid
Dukungan yang besar untuk selalu berinovasi	0.824	17.729	Valid
Berbagi Pengetahuan (AVE=0.822)			

Berbagi pengetahuan dan pengalaman	0.951	18.157	Valid
Berbagi kemampuan dan keterampilan	0.934	15.003	Valid
Membantu memecahkan masalah	0.870	10.334	Valid
Memberikan pendapat/masukan yang baik	0.868	20.445	Valid
Kecepatan Berinovasi (AVE=0.810)			
Ide-ide baru yang cepat untuk produk baru	0.923	60.107	Valid
Inovasi yang cepat untuk produk baru	0.911	34.112	Valid
Waktu yang singkat dan efisien dalam berinovasi	0.952	100.611	Valid
Mempercepat durasi proses inovasi	0.845	22.866	Valid
Inovasi yang lebih cepat dibandingkan pesaing	0.892	30.659	Valid
Produk baru yang lebih cepat dibandingkan pesaing	0.874	25.928	Valid

Table 5 shows the measurement model of discriminant validity test through the Fornell-Larcker Criteria approach. Based on Table 4 it can be seen that the constructs of innovation collaboration, management support, knowledge sharing and speed of innovation each have a discriminant value greater than the value of other constructs, thus testing the validity of using creativity can be continued in the next process.

Table 5: Uji Validitas Menggunakan Kriteria Fornell-Larcker

Konstruk	Berbagi Pengetahuan	Dukungan Manajemen	Kecepatan Berinovasi	Kolaborasi Inovasi
Berbagi Pengetahuan	0.906			
Dukungan Manajemen	0.424	0.859		
Kecepatan Berinovasi	0.291	0.576	0.900	
Kolaborasi Inovasi	0.454	0.491	0.598	0.837

4. Realibylitis Test

Table 6 shows the reliability test to check the consistency of each variable. With a minimum value above 0.4, it can be explained that all constructs can pass reliability testing. The reliability test also assesses the reliability of the composite. This can be accepted if the composite reliability value between 0.6 to 0.7, then for higher levels, the assessment results between 0.7 to 0.9 can be more satisfying (Hair et al., 2014). The results can be seen in Table 6. Reliability testing shows that for each composite reliability all variables are above 0.7. This means that all the variables in the research are reliable and can be continued for the next process.Tabel 6. Uji Reliabilitas

Variabel	Cronbach Alpha	Reliabilitas Komposit	Deskripsi

Kolaborasi Inovasi	0.858	0.903	Reliabel
Dukungan Manajemen	0.912	0.934	Reliabel
Berbagi Pengetahuan	0.931	0.948	Reliabel
Kecepatan Berinovasi	0.953	0.962	Reliabel

5. Srtuctural Model Testing

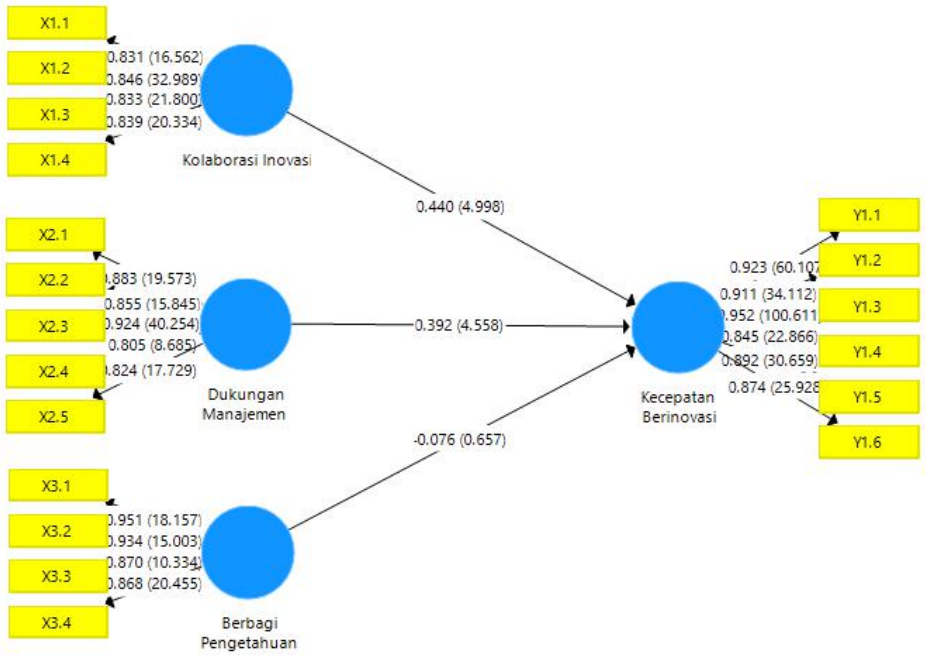
Structural model testing shows the value of correlation between variables, significance, and R-square value of the relationship between constructs. The PLS research model starts by knowing the R-square value of all dependent variables. This value is to determine the effect of exogenous latent variables on latent variables. Higher values represent more significant effects on endogenous variables. Following Table 7, the estimated R-square value using PLS shows the speed of innovating is 0.476. This means that innovation collaboration, management support and knowledge sharing can explain 46.7% and other variables outside this research model by 53.3%.

Tabel 7: R-Square

Variabel	**R-Square**	**Adjusted R-Square**
Kecepatan Berinovasi	0.467	0.450

The results of testing data using SmartPLS revealed that the structural equation model explained the correlation between constructs using bootstrapping. The results showed an empirical research model of innovation collaboration, management support, knowledge sharing and speed of innovation (See Figure 2).

Figure2: Research Model Empiris



6. Hypotesis Test

Table 6 presents the results of the measurement of hypothesis testing for all variables in the research model. The table below shows that the effect of innovation collaboration on speed of innovation is positive (0.440) and significance at p <0.01 with a statistical value of 4.998 (greater than t-table 1.97), so hypothesis 1 can be accepted. Management support for the speed of innovation has a positive effect (0.394) and is significant at p <0.01 with a statistical value of 4.558 (greater than t-table 1.97), so hypothesis 2 is acceptable. While the knowledge sharing variable on the speed of innovation has a negative relationship (-0.076) at p> 0.1 (0.256) with a statistical value of 0.657 (smaller than t-table 1.97), so hypothesis 3 is rejected. Then, based on Table 6 shows that the innovation collaboration variable has a greater influence on the speed of innovation with a construct coefficient of 0.440 when compared to management support with a construct coefficient of 0.392.

Table 6: Hypothesis Testing Results

Hipotesis	**Konstruk Koefisien**	**Standar Deviasi**	**t-statistik (t-tabel=1.97)**	**Kesimpulan**
H_1:Kolaborasi Inovasi (X_1)→Kecepatan Berinovasi (Y)	0.440	0.088	4.998	Diterima**
H_2: Dukungan Manajemen (X_2) →Kecepatan Berinovasi (Y)	0.392	0.086	4.558	Diterima**
H_3: Berbagi Pengetahuan(X_3) →Kecepatan Berinovasi (Y)	-0.076	0.115	0.657	Ditolak^n

Keterangan: ***sig.*< 0.01, ^{n}*sig*> 0.1

This finding explains that innovation collaboration can positively and significantly influence the speed of innovation, and the proposed hypothesis can be accepted. This means that the better the collaboration of innovation the better the speed of innovation. This result is supported by Kang & Kang (2010) who explain that companies implementing innovation collaboration in the manufacturing sector can emphasize the speed of innovation to maximize their market share. When the company will release new products faster than its competitors, the company has the opportunity to build market segments and maintain efficiency because the information and knowledge in this innovation collaboration is not owned by its competitors. In addition, the company's ability to utilize knowledge and information from innovation collaboration with partners can determine the level of innovation, such as new solutions and speed of innovation as a reaction to changing market demand so that innovation collaboration can increase the speed of innovation (Du Plessis, 2007; Fabrizio , 2009).

The results of this study also show that management support has a positive impact on the pace of innovation in manufacturing SMEs. This means that the better implementation of management support will increase the speed of innovation. Therefore, it can be concluded that there is a positive and significant effect of management support on the speed of innovation. This is supported by Carbonell & Rodríguez-Escudero (2009) which states that support from management has good potential in influencing the speed of the company to innovate and develop products to secure access to the resources needed for new product development (Carbonell & Rodríguez-Escudero , 2009). In addition, according to Rice, Connor, & Pierantozzi (2008) states that early management support for innovation can accelerate products entering

the market and increase the effectiveness of resource use. Therefore, management support can increase the speed of innovation (Hamdi et al., 2016).

The results of this study explain that the variable of knowledge sharing does not significantly influence the speed of innovation. This indicates that the better or not the implementation of sharing knowledge will not increase the speed of innovation. Therefore it is concluded that there is no positive and significant effect of the information sharing variable on the speed of innovation. The most probable reason is because the majority of manufacturing SMEs have constraints in the quality of human resources and the adoption of technology that is still lacking, so the role of sharing information internally, both sharing knowledge, skills, experience, abilities, and solutions in solving problems in manufacturing SMEs is not has a positive impact on the speed of innovation. In addition, most small companies do not have a formal organizational structure, no legal entity, and at least a business network. These results may be different if the knowledge sharing variable is applied to manufacturing SMEs who have the opportunity to share knowledge with large companies that already have good HR and technology, or can be applied to large companies that have extensive networks.

V. CONCLUSIONS, IMPLICATIONS, SUGGESTIONS AND LIMITATIONS OF RESEARCH

This study aims to analyze the factors that can increase the speed of innovation in manufacturing SMEs, such as the role of innovation collaboration, management support and knowledge sharing. Based on the test results that the author has done, it can be concluded that the innovation collaboration variable (X1) has a positive and significant effect on the speed of innovation (Y); management support variable (X2) has a positive and significant effect on the speed of innovation (Y); while the knowledge sharing variable (X3) does not have a positive and significant effect on the speed of innovation (Y) in manufacturing SMEs. In addition, the innovation collaboration variable has a greater influence on the speed of innovation when compared to the management support variable.Managerial implications for the owners or managers of manufacturing SMEs to take advantage of innovation collaboration with external partners such as consumers, suppliers, distributors, universities or research institutions that are expected to increase the speed of innovation. In addition, the importance of management support in allocating costs for innovation and creating a work atmosphere that supports innovation in order to increase the speed of innovation for manufacturing SMEs. The limitation of this study is the limited population coverage in Bandung and its surroundings as well as the industry category in manufacturing SMEs. Suggestions for further studies to examine a wider population with different industry categories. In addition, this research variable can be developed by adding independent or moderation variables such as learning orientation, absorptive capacity or knowledge transfer to the speed of innovation.

REFERENSI

[1] Ahmad, F., & Karim, M. (2019). Impacts of knowledge sharing: a review and directions for future research. *Journal of Workplace Learning*.

[2] Boyle, T. A., Kumar, U., & Kumar, V. (2005). Organizational contextual determinants of cross-functional NPD team support. *Team Performance Management: An International Journal*, *11*(1/2), 27–39.

[3] BPS. (2019). *Pertumbuhan Produksi Industri Manufaktur Provinsi Jawa Barat Triwulan IV Tahun 2018*. Bandung.

[4] Brettel, M., & Cleven, N. J. (2011). Innovation culture, collaboration with external partners and NPD performance. *Creativity and Innovation Management*, *20*(4), 253–272.

[5] Carbonell, P., & Rodríguez-Escudero, A. I. (2009). Relationships among team's organizational context,

innovation speed, and technological uncertainty: An empirical analysis. *Journal of Engineering and Technology Management - JET-M*, *26*(1–2), 28–45.

[6] Chandra, A. A. (2016). Ini Kendala yang Dihadapi Pelaku Industri Kreatif. Retrieved from https://finance.detik.com/berita-ekonomi-bisnis/d-3284282/ini-kendala-yang-dihadapi-pelaku-industri-kreatif

[7] Chen, J, Reilly, R. R., & Lynn, G. S. (2005). The Impacts of Speed-to-Market on New Product Success: The Moderating Effects of Uncertainty. *IEEE Transactions on Engineering Management*, *52*(2), 199–212.

[8] Chen, Jiyao, Damanpour, F., & Reilly, R. R. (2010). Understanding antecedents of new product development speed: A meta-analysis. *Journal of Operations Management*, *28*(1), 17–33.

[9] Cooper, R. G., & Edgett, S. J. (2004). Innovation performance and the role of senior management: Benchmarking innovation best practices. *Strategic Direction*, *20*(5), 28–30.

[10] Depkop. (2018). *Perkembangan data usaha mikro, kecil, menengah (UMKM) dan usaha besar (UB) Tahun 2012-2017*. Jakarta. Retrieved from www.depkop.go.id

[11] Du Plessis, M. (2007). The role of knowledge management in innovation. *Journal of Knowledge Management*, *11*(4), 20–29.

[12] Fabrizio, K. R. (2009). Absorptive capacity and the search for innovation. *Research Policy*, *38*(2), 255–267.

[13] Fatoki, O. 2019. Sustainability orientation and sustainable entrepreneurial intentions of university students in South Africa. Entrepreneurship and Sustainability Issues, 7(2), 990-999. http://doi.org/10.9770/jesi.2019.7.2(14)

[14] Ghozali, I. (2011). *Structural Equation Modeling: Concepts and Applications with AMOS Program Ver. 16*. Semarang: Publisher Agency Diponegoro University.

[15] Hair, J. F. J., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2014). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. *Long Range Planning*.

[16] Hamdi, S., Silong, A. D., Binti Omar, Z., & Mohd Rasdi, R. (2016). Impact of T-shaped skill and top management support on innovation speed; the moderating role of technology uncertainty. *Cogent Business & Management*, *3*(1).

[17] Hoyer, W. D., Chandy, R., Dorotic, M., Krafft, M., & Singh, S. S. (2010). Consumer cocreation in new product development. *Journal of Service Research*, *13*(3), 283–296.

[18] Kang, K. H., & Kang, J. (2010). Does partner type matter in R&D collaboration for product innovation? *Technology Analysis and Strategic Management*, *22*(8), 945–959.

[19] Larson, E. W., & Gray, C. F. (2014). *Project management: The managerial process*. Grandview Heights, OH: McGraw-Hill Education.

[20] Luzzini, D., Amann, M., Caniato, F., Essig, M., & Ronchi, S. (2015). The path of innovation: Purchasing and supplier involvement into new product development. *Industrial Marketing Management*, *47*, 109–120.

[21] Rice, M. P., Connor, G. C., & Pierantozzi, R. (2008). Implementing a learning plan to counter project uncertainty. *IEEE Engineering Management Review*, *36*(2), 92–102.

[22] Rizal, M. (2014). Kadin: Empat kendala penghambat pengembangan UMKM. *Kabarbisnis.Com*. Retrieved from http://www.kabarbisnis.com/read/2845011

[23] Rodríguez, N. G., Pérez, M. J. S., & Gutiérrez, J. A. T. (2008). Can a good organizational climate compensate for a lack of top management commitment to new product development? *Journal of Business Research*, *61*(2), 118–131.

[24] Shan, P., Song, M., & Ju, X. (2016). Entrepreneurial orientation and performance: Is innovation speed a missing link? *Journal of Business Research*, *69*(2), 683–690.

[25] Swink, M. (2000). Technological innovativeness as a moderator of new product design integration and top management support. *Journal of Product Innovation Management*, *17*(3), 208–220.

[26] Tsai, K. H. (2009). Collaborative networks and product innovation performance: Toward a contingency perspective. *Research Policy*, *38*(5), 765–778.

[27] Wang, S., & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. *Human Resource Management Review*, *20*(2), 115–131.

[28] Wang, Z., & Wang, N. (2012). Knowledge sharing, innovation and firm performance. *Expert Systems with Applications*, *39*(10), 8899–8908.

[29] Wichitsathian, S., Nakruang, D. 2019. Knowledge integration capability and entrepreneurial orientation: case of Pakthongchai Silk Groups Residing. Entrepreneurship and Sustainability Issues, 7(2), 977-989. http://doi.org/10.9770/jesi.2019.7.2(13)

[30] Wu, J. (2014). Cooperation with competitors and product innovation: Moderating effects of technological capability and alliances with universities. *Industrial Marketing Management*, *43*(2), 199–209.

[31] Yan, T., & Dooley, K. J. (2014). Buyer-supplier collaboration quality in new product development projects. *Journal of Supply Chain Management*, *50*(2), 59–83.