The Effect of Innovation on Increasing Business Performance of SMEs In Indonesia

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Abstract - The purpose of this study is to analyze the effect of innovation on SME business performance, which is motivated by the important role of SMEs in national economic growth should be accompanied by a significant increase in business performance. But in reality SME competitiveness is still low in the global market due to low innovation. This study uses an explanatory quantitative survey method. There are 231,181 SMEs in the manufacturing industry sector in West Java, Indonesia as a population with a sample of 346 respondents. Data collection uses a Likert scale 1-5 questionnaire. Data analysis using SEM. The analysis shows that innovation has a positive and significant effect on business performance. The implication of this research is that the performance of SME businesses can be improved through increased product innovation, process innovation, and distribution innovation.

Keywords: Innovation, Business Performance, Entrepreneurship, SMEs, Indonesia.

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1 Introduction

Small and Medium Enterprises (SMEs) in each country are always the focus of attention because of their great contribution to economic development, economic growth and job creation [1]

In the era of increasingly real and complex economic globalization, SMEs should be brave and ready to face the challenges of the global market and not only be concentrated in the local market [2]. The current potential of SMEs is not matched by the ability to improve performance and competitiveness in global markets, due to increasingly complex business problems such as the use of traditional technology, lack of capital, weak managerial aspects including decision making, low quality human resources, scale small businesses, lack of experience and limited financial access and low creativity and innovation of managers / owners, so they are less able to compete in local and global markets [3].

Likewise, the majority of SMEs in the processing industry sector in Indonesia are still concentrated in the local market, and are not ready to face competition in the global market. The growth of SMEs in the manufacturing industry sector is still constrained by various problems that hinder the success of SMEs businesses in Indonesia. SMEs products with minimal innovation with less developed production are feared to threaten business continuity. The difficulty of product marketing including the lack of market information, mastery of technology and networks has caused SMEs to not survive. This condition is strongly suspected to be triggered by the character of a weak entrepreneur, a managerial role that is not yet firm in managing the business as well as low innovation while the business environment continues to change [4], [5], [6], [7]. These weaknesses can have an impact on the unsuccessful implementation of entrepreneurship, while entrepreneurship is the result of discipline and the systematic process of applying creativity and innovation in meeting market needs and opportunities. The essence of entrepreneurship is the ability to create something new and different (create new and different) through creative thinking and innovative actions [8], [9].

Changes in the business environment are very fast, so innovation becomes important for the sustainability of the company. Innovation is an indicator of the success of winning the competition.
Innovation will bring the organization into a new dimension of performance and become important for all aspects of operations and work systems and processes, so that innovation is part of the culture of learning [8]. The ability to innovate is one of the most important characters of entrepreneurs [10]. Similarly, Craven and Piercy, 2009 that creativity and innovation have an important role for the growth of organizational performance in the global market [11], [12].

Schumpeter, 1934 stated that innovation activities carried out continuously are the main source of long-term success of the company [13]. Artz et al, 2010 in their findings that a company's ability to produce innovation may be more important than ever before to improve performance and maintain competitive advantage because of the high level of competition and shorter product life cycles [14]. At present innovation has become the goal of all companies [15].

Several previous studies have shown that innovation has a positive effect on business performance [12], [15], [16], [17], [18],[19]. There are also some findings that indicate product innovation does not affect business performance[20], and not all indicators of innovation affect performance, where product innovation has no effect while process innovation, marketing innovation and organizational innovation affect performance [21]. The difference in findings of the relationship dimensions of innovation and performance is a gap for researchers to conduct further research.

Based on the above phenomenon, it is necessary to do further research on improving SMEs business performance through innovation. The purpose of this study is to analyze the effect of innovation on the business performance of SMEs processing industries in West Java, Indonesia.

2 Problem Formulation
The method used is Quantitative with the explanatory survey to test the conceptual model that describes the relationship between constructs of innovation and business performance. Business performance is measured by 4 indicators, namely: Financial Perspective (Y1), Customer Perspective (Y2), Internal Business Process Perspective (Y3) and Learning & Growth Perspective (Y4) [22], [23], [24], [25].

While innovation is measured using three indicators, namely: product innovation (X1), process innovation (X2), and distribution innovation (X3) [26],[27],[28],[29].

The research framework was built to determine the effect of innovation on business performance in reference to previous relevant research. The model proposed in this study is shown in Figure 1.

![Fig.1. Proposed Research Framework](image)

To determine the effect of innovation on business performance, the hypothesis developed is as follows: 

**H1: Innovation influences business performance**

Data collection uses a Likert scale questionnaire 1-5. The population in this study were SMEs the manufacturing sector in West Java, Indonesia measuring 203.181, with proportional random sampling techniques, obtained sample size 346. The research questionnaire was tested first on 40 SMEs using Pearson Correlation (r> 0.50 and sign <0.05) and Cronbach's Alpha (0.971 and 0.726), all question items are valid and reliable. To test the effect of innovation on business performance, Structural Equation Modeling (SEM) AMOS is used.

3 Problem Solution
Profile of respondents who became the study sample can be seen in Table 1.

Table 1 shows that the majority of respondents were male (92%) with the most age (58%) between 46-55 years and had the most high school education (61%). Business ownership status, the majority of respondents (71%) as owners and managers and have been in business for at most between 16-20 years (35%). Most of the businesses run in the field of textiles and textile products are 54.62% with the most marketing area (37%) at the national level.
The innovation variables in this study were measured using three dimensions: product innovation, process innovation, and distribution innovation as explained in Table 2.

Table 2 shows that innovation in SMEs in the manufacturing sector in West Java, Indonesia tends to be low. The dimensions of product innovation are at a low level with a percentage gain of 75.15%. The low level of product innovation is due to the lack of unique product design carried out by 81.50% of respondents as well as the lack of renewal of products produced by 68.79% of respondents. The dimensions of process innovation are at a low level with a percentage of 80.68%. The low process innovation is due to the inefficient 88.15% of respondents in controlling inventory with business partners, also due to the reluctance of 67.24% of respondents to run production with business partners. The dimensions of distribution innovation are at a low level with a percentage of 67.48%. The low distribution innovation is due to the low frequency of online-based marketing use of 70.23% of respondents, there are also 65.03% of respondents who have not used digital marketing as a media for promotion and sales of their products.

Business performance is measured using four perspectives: financial perspective, customer perspective, internal business process perspective, and learning and growth perspective as described in Table 3.

Table 3 shows that business performance in SMEs in the manufacturing sector in West Java, Indonesia tends to be low. The financial perspective is at a low level with a percentage of 73.56%. This low dimension is due to the low sales growth of 73.70% of respondents and operating profit growth of 73.41% of respondents. The customer perspective has a growth that tends to be low with a percentage of 61.71%. This low dimension is due to the low ability of 67.92% of respondents to get new customers and the low ability of 55.49% of respondents to retain customers. The internal business process perspective tends to be low with a percentage of 68.80%. Likewise with product development where 63.9% of respondents did not
make product changes in the last 3 years. The learning and growth perspective is at a low level with a percentage of 66.61%. This low dimension is caused by the low of 76.87% of respondents related to changes in employee specific skills that have an impact on the low performance of 56.35% of respondents.

Table 3. Respondents Response to Business Performance

| No. | Dimension                          | % Frequency Score | Achievements Criteria |
|-----|------------------------------------|-------------------|-----------------------|
| 1   | Financial Perspective              | 73.56             | Tends to be low       |
| 2   | Operating Profit Growth Rate       | 73.41             | Tends to be low       |
| 3   | Customer Retention Rate            | 55.49             | Tends to be low       |
| 4   | Customer Acquisition Rate          | 67.92             | Tends to be low       |
| 5   | Internal Business Process Perspective | 68.30         | Tends to be low       |
| 6   | The level of efficiency in company operations | 73.70         | Tends to be low       |
| 7   | The rate of change in product development | 63.90         | Tends to be low       |
| 8   | Learning and Growth Perspective    | 66.61             | Tends to be low       |
| 9   | Level of change in employee specific skills | 76.87         | Tends to be low       |
| 10  | Growth rate of employee performance | 56.35             | Tends to be low       |

The results of the measurement model test for innovation and business performance are shown in Figure 2.

![Fig 2. SEM Measurement Results]

The normality test results in Table 5 note that not all indicators have a critical ratio of skewness values below 2.58, indicators Y1 and X2 have a critical ratio of skewness values above 2.58, meaning that not all variables observed are normally distributed. Similarly, the multivariate normality test gives the value c.r. (9,465) > 2.58 which shows that multivariate data is not normally distributed.

Table 4. Model of Measurement

| Variable     | Indicator | λ  | η² | e  | CR     | VE  |
|--------------|-----------|----|----|----|--------|----|
| Innovation   | X1        | 1.003 | 0.006 | 0.950 | 0.854  |
|              | X2        | 0.923 | 0.785 | 0.418 | 0.267  |
|              | X3        | 0.856 | 0.733 | 0.431 | 0.811  |
| Business     | Y1        | 0.882 | 0.778 | 0.222 |
| Performance  | Y2        | 0.754 | 0.569 | 0.811 |
|              | Y3        | 0.882 | 0.778 | 0.222 |

λ= Loading Factor, e=error, CR=composite reliability, VE=variance extracted
Source: SEM AMOS Output

Table 5. Assessment of Normality

| Variable | min  | max  | skew | c.r. | kurtosis | c.r. |
|----------|------|------|------|------|----------|------|
| Y1       | 2,000 | 10,000 | 0.203 | 1.542 | -1.216 | -4.618 |
| Y2       | 2,000 | 10,000 | 0.355 | 2.543 | -1.078 | -4.092 |
| Y3       | 2,000 | 10,000 | 1.166 | 1.253 | -0.587 | -3.256 |
| X1       | 2,000 | 10,000 | 0.523 | 3.974 | -0.976 | -3.704 |
| X2       | 4,000 | 10,000 | 0.461 | 3.048 | -1.773 | -2.935 |
| X3       | 4,000 | 10,000 | -0.070 | 5.553 | -0.507 | -3.445 |

Testing of multivariate outliers is done by taking into account the value of Mahalanobis distance (d²). Referring to Table 6, the maximum Mahalanobis distance (d²) value (40.262) <X² (40.87) is known. Thus, multivariate there are no cases of outliers in the data.

Table 6. Outliers Data

| Mahalanobis distance (d²) | Max  | Min  | X²  |
|---------------------------|------|------|-----|
|                           | 40.262 | 8,010 | 40.87 |

Multicollinearity evaluation can be seen through the Determinant of sample covariance matrix and Condition number. The determinant value is very small and the Condition number is greater than 1000, indicating an indication of multicollinearity or singularity problems so that the data cannot be used for research [31].
Referring to Table 7, it can be seen that the value of the Determinant of sample covariance matrix (3651,975) > 0 and Condition number (98,199) < 1000, so it can be concluded there are no multicollinearity and singularity problems in the analyzed data.

Table 7. Multikolinieritas

| Determinant of sample covariance matrix | Condition number |
|----------------------------------------|------------------|
| 3651,975                               | 98,199           |

Based on the assumption evaluation test results, it can be seen that the data distribution is not normal but multivariate there are no outliers in the data and the sample data sets empirically still meet the main statistical assumptions, namely there is no multicollinearity problem [30].

The test of the Goodness of Fit model in Table 8 shows that not all measures of the research model fit the data, but overall the research model is Fit, because GFI and AGFI ≥ 0.90, RMSEA ≤ 0.08, and NFI, CFI and TLI ≥ 0.90 [30].

Table 8. Goodness of Fit

| No. | Goodness of Fit Index | Critical Value | Result | Evaluation |
|-----|-----------------------|----------------|--------|------------|
| 1   | Significant Prob.     | ≥ 0.05         | 0.000  | Bad Fit    |
| 2   | RMSEA                 | ≤ 0.08         | 0.011  | Good Fit   |
| 3   | GFI                   | ≥ 0.90         | 0.968  | Good Fit   |
| 4   | AGFI                  | ≥ 0.90         | 0.930  | Good Fit   |
| 5   | RFI                   | ≥ 0.90         | 0.969  | Good Fit   |
| 6   | IFI                   | ≥ 0.90         | 0.987  | Good Fit   |
| 7   | TLI                   | ≥ 0.90         | 0.978  | Good Fit   |
| 8   | CFI                   | ≥ 0.90         | 0.987  | Good Fit   |
| 9   | NFI                   | ≥ 0.90         | 0.981  | Good Fit   |

Source: SEM AMOS Output

The research findings show that innovation has a positive effect on business performance. The coefficient is positive, meaning that the higher the ideal innovation will be followed by increasing business performance. This finding in accordance with [16] highlights the relationship of innovation-performance in SMEs depending on the context: such as company age, type of innovation and culture that influence the impact of innovation on company performance. Innovation is an important factor because it leads to improvements in products, processes, making continuous progress that helps companies survive, allowing companies to grow faster, more efficiently and more profitably than not innovators [15]. Process innovation, marketing innovation and organizational innovation affect performance. While product innovation does not affect performance [21]. Product innovation and process innovation influence company performance significantly, where stronger influence comes from product innovation [19]. Past performance is a strong indicator of the results of innovation, so that future performance can be more predictable, innovation is an important factor that has an impact on improving performance [18].

The research findings further strengthen the concept of innovation Schumpeter, 1934 that to create economic growth needed innovators or entrepreneurs, namely people who are involved in the business world who have the enthusiasm and courage to apply new ideas into reality. The need for an innovation process that is consistent with the search for change and systematic analysis of potential innovators as a
source of social and economic transformation [8]. Innovation is the implementation of renewal and is important for all aspects of operations and work systems and processes that will bring the organization into a new dimension of performance.

Referring to the results of the research and discussion described above, it can be explained that improving business performance can be done through increased innovation. Thus the model of improving business performance (financial perspective, customer perspective, internal business process perspective, learning and growth perspective), can be determined through innovation (product innovation, process innovation, distribution innovation), which is increasing.

4 Conclusion

Innovation in SMEs in the manufacturing sector in West Java, Indonesia tends to be low, as well as the achievement of business performance at a level that tends to be low. Innovation has a positive influence on business performance. Innovation can explain variations that occur in business performance according to the research model. The low level of innovation and low business performance, if left unchecked will hinder the development of SMEs, chances are that SMEs will grow faster and have a smaller competitive advantage. To prevent adverse effects due to low innovation and business performance, SMEs players should continually improve indicators that are perceived low by respondents by increasing competitive advantage in product renewal, product uniqueness and technological renewal. The use of resources and inventory control with business partners, becomes important in the effort of effectiveness and efficiency. Likewise in product distribution by utilizing offline and online media.

This research is limited to innovation variables with three dimensions that affect business performance. Limitations in this study should be considered as opportunities for future research. (1) This study investigates five business fields from 24 business sectors in the manufacturing sector, therefore further research should not limit the scope of research; (2) This study uses the explanation survey method, while more in-depth exploratory research can explore the potential and opportunities of SMEs so as to obtain a comprehensive picture of the characteristics of SMEs in Indonesia; (3) This study only uses innovation as a predictor of business performance, the next research should add other constructs so that the most dominant constructs can influence business performance.

References

[1] Wanambisi, Albert Njiwikale, and Henry M. Bwisa. "Effects of microfinance lending on business performance: A survey of micro and small enterprises in Kitale municipality, Kenya." International Journal of Academic Research in Business and Social Sciences 3.7 2013, 56.

[2] Suryana, Y., & Bayu, K., Kewirausahaan: Pendekatan Karakteristik Wirausahawan Sukses Ed. 2. Kencana, 2012.

[3] Zimmerer, T. W., Scarborough, N. M., & Wilson, D. Essentials of entrepreneurship, e-book. 2008.

[4] Herlinawati, Erna, Eeng Ahman, and Amir Machmud. "The Effect of Entrepreneurial Orientation on SMEs Business Performance in Indonesia." Journal of Entrepreneurship Education, 2019.

[5] Herlinawati, Erna. Model Peningkatan Kinerja Bisnis Melalui Kompetensi Kewirausahaan, Orientasi Kewirausahaan, dan Inovasi: Studi pada UMKM Sektor Industri Pengolahan di Jawa Barat. Diss. Universitas Pendidikan Indonesia, 2019.

[6] Herlinawati, E., Sumawidjaja, R.N., & Machmud, A., The role of sharia microfinance in SMEs business development. International Conference on Economic Education and Entrepreneurship. Proceeding 3 (1), 2017.

[7] Machmud, A., & Ahman, E, Effect Of Entrepreneur Psychological Capital And Human Resources On The Performance Of The Catering Industry In Indonesia. Journal of Entrepreneurship Education, 22(1), 2019, 1-7.

[8] Suryana, Kewirausahaan: kiat dan proses menuju sukses, edisi keempat. Jakarta: Salemba Empat, 2014.

[9] Umar, Azmi, and Rohana Ngah. "The relationship of entrepreneurial competencies and business success of Malaysian SMEs: The mediating role of innovation and brand equity. World Academy of Science, Engineering and Technology." International Journal of
Economics and Management Engineering, 4.6, 2017.

[10] Larsen, Povl, and Alan Lewis. "How award-winning SMEs manage the barriers to innovation." Creativity and innovation management 16.2, 2007, 142-151.

[11] Cravens, David W., Nigel F. Piercy, and Artur Baldauf. "Management framework guiding strategic thinking in rapidly changing markets." Journal of Marketing Management 25.1-2, 2009, 31-49.

[12] Hadiyati, E. Creativity and innovation affect small business entrepreneurship. Journal of Management and Entrepreneurship, 13(1), 2011, 8-16.

[13] Schumpeter, "Innovation and entrepreneurship", Industrial and corporate change 5.3, 1993, 883-896.

[14] Artz, Kendall W., et al. "A longitudinal study of the impact of R&D, patents, and product innovation on firm performance." Journal of product innovation management 27.5, 2010, 725-740.

[15] Atalay, M., Anafarta, N., & Sarvan, F., The relationship between innovation and firm performance: An empirical evidence from Turkish automotive supplier industry. Procedia-Social and Behavioral Sciences, 75, 2013, 226-235.

[16] Rosenbusch, N. et al., Is innovation always beneficial: A meta analysis of the relationship between innovation and performance SMEs. Journal of Business Venturing, 26, 2011, 441–457.

[17] Price, D.P. et al., The relationship between innovation, knowledge and performance, in family & non family firms: an analysis of SMEs. Journal of Innovation and Entrepreneurship, 2013.

[18] Welsch, H., Price, D. P., & Stoica, M., Innovation, Performance and Growth Intentions in SMEs. International Journal of Economics and Management Engineering, 3(5), 2013, 176.

[19] Rosli, M. M., & Sidek, S., The Impact of Innovation on the Performance of Small and Medium Manufacturing Enterprises:: Evidence from Malaysia. Journal of Innovation Management in Small & Medium Enterprises, 1(1), 2013.

[20] Ardyan, E. & Putri, O.T, The positive impact of an entrepreneur who has entrepreneurial competence on the success of product innovation and business performance. Journal of Entrepreneurship and Small and Medium Enterprises, 1 (1), 2015, 11-19.

[21] Hamali, S., & Hidayat, C, The Influence of Innovation Dimensions on Marketing and Financial Performance in Small Industries of Binong Jati Knitwear in West Java. Journal of Banking & Management, 2017.

[22] Kaplan, R.S. & Norton, D.P. (1992). The Balanced scorecard-Measures That Drive Performance, Harvard Business Review, 1992, 71-79.

[23] Kaplan, R.S. & Norton, D.P, Balanced scorecard. Jakarta: Erlangga, 1996.

[24] Kaplan, R.S. & Norton, D.P, Alignment: Using the balanced scorecard to create corporate synergies. Boston: Harvard Business School Press, 2006.

[25] Neely, A, Business performance measurement: theory & practice. Cambridge University Press, 2004.

[26] Neely, A, Business performance measurement 2nd edition: Unifying theory and integrating practice. Cambridge University Press, 2007.

[27] Wang, Wenjun, Wei Lu, and John Kent Millington. "Determinants of entrepreneurial intention among college students in China and USA." Journal of Global Entrepreneurship Research 1.1, 2011, 35-44.

[28] Padoan, Pier Carlo. SMEs, entrepreneurship and innovation. Univerza v Ljubljani, Ekonomsk fakulteta, 2010.

[29] Fontana, A, Innove we can. Manajemen inovasi dan penciptaan nilai. Jakarta: Gramedia Widasarana Indonesia. 2009.

[30] Maholtra, N.K., Marketing research an applied orientation. 6th edition. New Jersey: Pearson education Inc, Prentice Hall., 2014.

[31] Tabachnick, B. G., & L. S. Fidell, Using Multivariate Statistics (5th ed.). California: Pearson Education Inc, 2007.