

Innovation Impact on Business Performance in Indonesia: Build Governance and Sustainability for the Next Normal

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Abstract - Uncertain end of Pandemic Covid19 is a big challenge for business sustainability. This study aims to explore existing innovations of business and its performances. It is important for business governance in the next normal era. Regarding Oslo Manual (2015), the innovations variables consist of products, operations, management, and marketing innovations. The performance variables consist of sales increase, cost efficiency, competitiveness, and better customer services. It is measured by Pearson's Correlation with secondary data from BPS, collected from 6 million companies in 2019 survey.

The result shows that marketing innovation has strong positive correlation with business performance, compared to innovation of product, operations and management. All the innovations are strongly correlated with competitiveness, better customer service and sales increase, but no correlation with cost efficiency. Assuming the situation of movement limitation during Covid19 pandemic as next normal era, the need for marketing innovation and product innovation can be continued, because they will potentially provide a higher performance on sales, competitiveness and better service

Keywords - Innovation; Performance; Next Normal; Business Governance; Sustainability

I. INTRODUCTION

The pandemic of Covid-19 currently restricted population movement and interaction, which also impact business governance. Adaptation capability through business innovation can be the key factor for sustainability. But innovation process is not simple sometimes, because the results are not necessarily successful when the businesses are not accustomed to innovate. However, Covid-19 pandemic situations seem to be forcing businesses to innovate. Thus, it is necessary to observe what is the types of innovation needed for successful business.

Many research conducted on innovation, especially on macro or aggregate approach, and on micro or firms' approach. At the macro approach, innovation measured indirectly, by using regression intercept, dummy variable, and etc. At the micro approach, innovation measured directly with specific indicators and conducted in firms' level. Both approaches have its own strength and weakness. Macro-approach sometimes cannot specifically indicate the real type of innovations, while micro-approach sometimes is in a very limited for industrial analysis due to expensive data collection process. In this circumstance, the needs of business association, communities and government for developing innovative governance are

unfulfilled. For bridging the two approach, we need meso-level of analysis. Fortunately, in 2019, the idea can be applied, when Badan Pusat Statistik (BPS) conducted survey on 6 million companies, and provided more specific measurement of innovations, the performance, and the other related indicators. Moreover, the data also represent all business sectors. Unfortunately, the valuable data are still unstructured to explain empirical situation of business innovations. With the cross-sectional data availability, we can only calculate the relation between types of innovation with their performances in a simple technique, but it is still fruitful for deeper understanding and open further research on business innovations. Bridging the gap between macro and micro approach is the novelty of this research,

The general objective of this research are to find out the relation of businesses innovation types and its performance as pathway for business and stakeholders for the next normal. The specific objectives of this research are: (1) what is the business innovation types in Indonesia, (2) what is the performance of the innovation, and (3) what types of innovations can be benefit for the business as important information for the new normal situation. This research will be useful for business strategy, ecosystem development and government support on innovations.

II. LITERATURE REVIEW

A. Business Innovation

Radical changes in business environment compel business to be more innovative. Innovation plays important role in business and economic growth. One of the indicators in a successful business is innovation (Herlinawati & Machmud, 2020). In a highly competitive and global economy, innovation is considered a key factor for business success (Rajapathirana & Hui, 2018). In addition, with innovation, the business will have a clear future opportunity (Rajapathirana & Hui, 2018). The business can maintain its positions and improve their level of profits by innovation (Hu & Hsu, 2008; Kaminski, de Oliveira, & Lopes, 2008). Those statement should make businesses to realize how important to understand innovation competencies that is relevant as driver for economic growth under the global change (Ko & Lu, 2010).

There are many activities in innovation that include demand-side factors, competence-building activities, innovation support organization and other institutions such as: research and development (R&D); competence building

in the labor force; formation of new product markets; user feedback and interaction; innovation support organizations (entrepreneurship, public research, technology transfer, consulting and so on); networks (formal and informal); institutions (laws and regulations); financial and administrative institutions (Edquist, 2005). Activities on innovation are all scientific, technological, organizational financial, commercial steps that will lead to the implementation of innovations and R&D also included but not directly related to the development of innovation (OECD, 2005). Market demand and market structure characteristics are also an important aspects that can influence innovation and knowledge flows (Bloch, 2007). Those implication on innovation can be discuss more with the survey of innovation. There have been many researches on measurement of innovation with Oslo Manual by OECD, 2005. Implementation of innovation can significantly improve product (good or service), or process or a new marketing method or a new organizational method in business practices, workplace organization or external relations (OECD, 2005). The framework in Oslo Manual represents an integration of insight from various firm-based theories of innovation (OECD, 2005).

There are four types of innovation by OECD (2005) such as product innovations, process innovations, marketing innovations and organizational innovations. Product innovations and process innovations are closely related to the concept of technological product innovation and technological process innovations. Marketing innovations and organizational innovations broaden the range of innovations. Those explanations are based on Oslo Manual by OECD, 2005. Here is the detailed definition of the type on innovations:

- Product Innovation is the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses. This includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or t=other functional characteristics.
- Process Innovation is the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software.
- Marketing Innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing.
- Organizational Innovation is the implementation of a new organizational method in the firm's business practices, workplace organization or external relations.

Organization innovation can be applied to the improvement of products, services and processes; organizational innovation thus encompasses product innovation, the development of new production process technology and the adoption of new management systems (Robbins, 1996). Innovation has three-dimensional frameworks like technological, market and organizational

competencies (Ko & Lu, 2010). The other researcher finds there are three areas of competencies in innovation: product, process and market (Ford & Saren, 2001; Sidney G. Winter, 2003). Many disciplines have been studied and conceptualized innovation (Ting, Wang, & Wang, 2012). In most studies focus on a pair of types of innovation likes administration and technical, product and process, and radical and incremental (Ting et al., 2012).

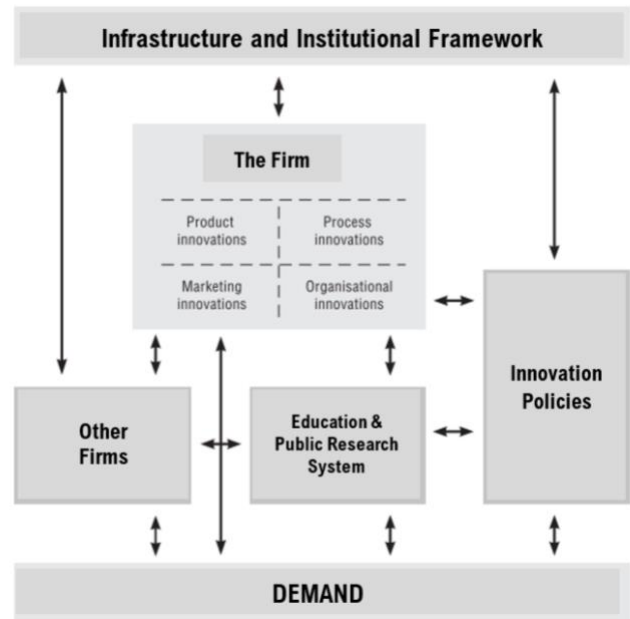


Figure 1. The Innovation Measurement Framework
 (Source: OECD, 2005)

B. Performance of Business Innovation

Performance always been considered as the level measurement of company's success. It can be referred as a work of achievement (Ioniță, 2013). There are specific values that aligned with a success criterion by entrepreneurs such as firm continuity, profitability, power and achievement, stimulation, hedonism, self-directing, work-life balance and satisfied stakeholder, security, conformity and tradition values (Ioniță, 2013). The achievement itself does not work alone but it will involve managers, partners and people who run and lead to a continuous and flexible process (Yusuff, Mohamad, & Wahab, 2019). Implementing knowledge is one of the acts that will make the performance giving a success result (Teoh & Chong, Dr, 2007).

Business performance is defined as the ability of operational that can satisfied the company's major shareholders (Smith & Reece, 1999). Benefit of good business performance are better resource management, wealth generation and employment opportunities (Madrid-Guijarro, Auken, & García-Pérez-de-Lema, 2007). Entrepreneurs can understand the firm's position in the market if they did measuring business performance (Ab Wahab, Yusuff, Musa, & Hashim, 2020). The result of company when gained profit and growth is the achievement from its business performance (Gunday, Ulusoy, Kilic, & Alpkan, 2011). The measurement of

performance in organization have two basic types such as related to results (financial performance) and focus on the determinants of the results (quality, flexibility, resource utilization and innovation) (Neely et al., 2000). There are five indicator that will be measured in business performance by adding and averaging the results such as market share, revenues, profit, cash flow and decrease of cost (Begonja, Čiček, Balboni, & Gerbin, 2016).

The business performance will come to a new dimension where innovation became an important part of all aspects of operation and work systems and processes (Suryana, 2014). Business performance can be achieved when the implementation of innovation is effective to constructing competitive advantage (Koc & Ceylan, 2007). There are many literatures that has found out innovation as a key factor contributing to business performance (Kijkasiwat & Phuensane, 2020). Analysis about a direct effect of innovation on business performance has been studied a lot (Mustafa & Yaakub, 2018; Prange & Pinho, 2017; Rosli & Sidek, 2013; Ullah, 2020). In Other Word, there are moderating factors that can enhance the positive effects of innovation on business performance such as organizational characteristics, type of leadership, internal resource and environmental characteristics (Kim & Ahn, 2016). A successful innovation can be showed with their result of performance, especially in financial performance through product and process innovation (Fernandes, Ferreira, & Raposo, 2013).

The impacts of innovation on the performance can be demonstrated by both financial and non-financial indicators (Mashal, 2017). Every types of innovation developments are related to every aspect of performance (Saunila, 2014). Besides there is a study that suggested to consider a potential negative effects of innovation that could impact their business environment and lead them to uncontrollable business growth (Laforet, 2011). Laforet (2011) said that the business needs to have capacity to innovate so innovation can be built. In other word, when the businesses tried to implementing innovation have to understand and can integrate them with all the business system. Performance cannot be enhance if the innovation not being correctly used and explained innovation as a part of the overall business strategy of an organization (Ting et al., 2012).

Organizational innovation, product innovation and process innovation have their own aspect that contribute to environmental and business performance (Singh, Chakraborty, & Roy, 2016). Adopting innovation in organization can enhance their performance (Ting et al., 2012). The firm itself needs to understand what type of innovation that fit best in order to improve its performance (Ting et al., 2012). Improving business performance can be achieved when the businesses can simplifies organizational characteristics and manpower and focus on the system when implementing innovation on business procedures (Kyung, 1998). Process innovation also can contribute to business performance that will increase efficiency through active process innovation (Hun, 2013).

C. Framework

This research encourages understanding on innovation of business sectors in Indonesia, for business to choose appropriate innovations strategy and for government and business association to develop innovative ecosystem. Moreover, this topic has not been discussed extensively in Indonesia. Among many type of innovations, this research use types of innovation of Oslo Manual, such as product, operation, management and marketing innovation. Innovation performance can be measured by sales increase, cost efficiency, competitiveness and better customer service. Then we measure the associations between innovations and the performances. The association can be uncertain because many factor potentially affect the effectivity of an innovation. Every pattern of correlation between the type of innovation and its performance will become important informasi for next normal.

III. METHODOLOGY

This research identifies innovation types and its performance of all economic sectors in Indonesia. The types of innovation consist of: (1) product innovation, (2) process innovation, (3) marketing innovation, and (4) organizational innovation. Innovation performance consists of; (1) sale increase, (2) cost efficiency, (3) competitiveness, and (4) better customer services. The association between innovation and its performance was measured by Pearson Correlation, as formula 1 as follow;

$$r_{IP} = \frac{n \sum I.P - \sum I \sum P}{\sqrt{(\sum I^2 - (\sum I)^2) \cdot (n \sum P^2 - (\sum P)^2)}} \quad (1)$$

where;

I = innovations (consists of product innovation, process innovation, management innovation, and marketing innovation.

P = performance (sales increase, cost efficiency, competitiveness, better customer service).

r_{IP} = correlation between innovations and its performances

Furthermore, based on the pearson correlations, then the correlation significancy level was tested using the following Product Moment;

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} \quad (2)$$

This research uses secondary data from BPS 2019, on the basis oh ISIC business sector: (A) mining and quarrying; (B) manufacturing; (C) electricity & gas; (D) water supply, sewerage, waste management and remediation activities; (E) construction; (F) wholesale and retail; repair of motor vehicles and motorcycles; (G) transportation & storage; (H) accommodation & food service activities; (I) information and communication; (J)

financial & insurance activities; (K) real estate activities; (L) professional, scientific, & technical activities; (M) rent, leasing, employment, travel agencies and other support business; (N) human health & social work activities; (O) art, entertainment, & recreations; and (P) other services.

IV. FINDINGS AND DISCUSSION

A. Business Innovation in Indonesia

In 2018, there was 6.115.400 business (23,74%) of total 25.763.552 businesses in Indonesia, actively carried out innovation. The type of innovations is product innovation, operational process innovation, managerial process innovation and marketing innovation. The common innovations are product innovation (16,67%) and marketing innovation (15,38%), while fewer innovation are in operation and management innovation. Based on ISIC, the higher percentage of business innovation is in sector of financial & insurance activities, transportation & storage, accommodation & food service activities. The detail percentage of business sector innovation can be seen in the following table,

TABLE 1.
PERCENTAGE OF INNOVATING COMPANIES IN 2018 (PART 1)

ISIC Sectors	Product	Operation
Mining and Quarrying	1,69	9,45
Manufacturing	18,30	9,26
Electricity and Gas,	13,77	10,18
Water Supply, Sewerage, Waste Management and Remediation Activities	4,47	4,13
Construction	15,11	14,40
Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	12,96	9,07
Transportation and Storage	19,92	14,24
Accommodation and Food Service Activities	23,56	12,87
Information and Communication	17,97	14,85
Financial and Insurance Activities	33,65	21,94
Real Estate Activities	13,23	4,29
Professional, Scientific, & Technical Activities	24,78	19,71
Rent, Leasing, Employment, Travel Agencies and Other Support Business	28,37	14,73
Human Health and Social Work Activities	22,58	12,16
Art, Entertainment, & Recreations	14,75	9,78
Other services	17,70	10,47
Total	16,67	10,35

Source: Statistics Indonesia (2019)

TABLE 1.
PERCENTAGE OF INNOVATING COMPANIES IN 2018 (PART 2)

ISIC Sectors	Management	Marketing
Mining and Quarrying	9,51	2,67
Manufacturing	7,82	14,38
Electricity and Gas,	14,08	12,62
Water Supply, Sewerage, Waste Management and Remediation Activities	5,18	6,79
Construction	14,54	13,75
Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	4,77	10,99
Transportation and Storage	16,10	17,29
Accommodation and Food Service Activities	14,88	26,36
Information and Communication	13,05	17,21
Financial and Insurance Activities	25,98	29,95
Real Estate Activities	3,77	16,85
Professional, Scientific, & Technical Activities	13,18	19,76
Rent, Leasing, Employment, Travel Agencies and Other Support Business	16,59	26,42
Human Health and Social Work Activities	21,71	13,96
Art, Entertainment, & Recreations	14,05	19,07
Other services	12,65	18,30
Total	8,68	15,38

Source: Statistics Indonesia (2019)

Table 1 shows predominant or more innovating businesses, indicated by higher percentage of a certain sector than the national average value of innovations. As is shown that 16.67% of business conducted product innovation. Among the product innovation business, the predominant innovating sectors are financial & insurance activities; rent, leasing, employment, travel agencies and other support business; professional, scientific, & technical activities; accommodation & food service activities; human health and social work activities; transportation & storage; information & communication; and other services.

Furthermore, for operations innovation, the predominant business sectors are financial and insurance activities; professional, scientific, & technical activities; rent, leasing, employment, travel agencies and other support business; information and communication; construction; transportation and storage; human health and social work activities; and other services.

The predominant management innovation of business sectors are financial and insurance activities; human health and social work activities; rent, leasing, employment, travel agencies and other support business; transportation and storage; accommodation and food service activities; construction; art, entertainment, & recreations; professional, scientific, & technical activities; information and communication; other services; and mining and quarrying.

The predominant marketing innovation of business sector are financial and insurance activities; rent, leasing,

employment, travel agencies and other support business; accommodation and food service activities; professional, scientific, & technical activities; art, entertainment, & recreations; other services; transportation and storage; information and communication; and real estate activities.

Among all the business sectors, transportation and storage; accommodation and food service activities; construction; information and communication; financial and insurance activities; professional, scientific, & technical activities; rent, leasing, employment, travel agencies and other support business; and other services have high percentage in all four types of innovation. But water supply, sewerage, waste management and remediation activities; and wholesale and retail trade; repair of motor vehicles and motorcycles sectors are all low.

B. Performance of Business Innovation in Indonesia

The innovations conducted by the businesses are sometimes success or fail. Furthermore, for all types of innovation of business sector, we can analyze the the result with its innovation performance. The result of innovations performance included: (1) sales increase; (2) cost efficiency; (3) competitiveness; and (4) better customer service.

TABLE 2.
PERCENTAGE OF INNOVATION PERFORMANCE INCREASE IN 2018
(PART 1)

ISIC	Sales Increase	Cost Efficiency
Mining and Quarrying	23,02	21,32
Manufacturing	59,38	34,33
Electricity and Gas,	42,52	38,34
Water Supply, Sewerage, Waste Management and Remediation Activities	70,01	59,82
Construction	67,60	41,32
Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	46,08	32,92
Transportation and Storage	54,44	41,59
Accommodation and Food Service Activities	64,28	32,99
Information and Communication	47,92	52,81
Financial and Insurance Activities	56,78	35,31
Real Estate Activities	64,75	21,97
Professional, Scientific, & Technical Activities	44,04	40,62
Rent, Leasing, Employment, Travel Agencies and Other Support Business	75,75	29,46
Human Health and Social Work Activities	48,19	30,06
Art, Entertainment, & Recreations	62,95	43,20
Other services	59,62	34,20
Indonesia	55,19	34,22

Source: Statistics Indonesia (2019)

Sales increase is the most common benefits of business, or 55,19%, and better customer service, around 44,26%. The other benefits in competitiveness are 36.52% and the

least is cost efficiency benefit around 34.22%. The detail innovation performances are as Table 2 shown.

TABLE 2.
PERCENTAGE OF INNOVATION PERFORMANCE INCREASE IN 2018
(PART 2)

ISIC	Competitiveness	Better Customer Service
Mining and Quarrying	6,94	69,67
Manufacturing	38,90	34,81
Electricity and Gas,	32,04	65,20
Water Supply, Sewerage, Waste Management and Remediation Activities	29,42	44,21
Construction	40,56	43,49
Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	31,38	35,95
Transportation and Storage	38,01	65,13
Accommodation and Food Service Activities	41,06	51,12
Information and Communication	45,95	49,76
Financial and Insurance Activities	45,53	63,95
Real Estate Activities	41,46	47,88
Professional, Scientific, & Technical Activities	27,54	34,50
Rent, Leasing, Employment, Travel Agencies and Other Support Business	36,80	75,40
Human Health and Social Work Activities	29,43	61,54
Art, Entertainment, & Recreations	45,39	49,53
Other services	37,92	57,78
Indonesia	36,52	44,26

Source: Statistics Indonesia (2019)

Business sectors which have had higher performance on sales increases are manufacturing sector, water supply, sewerage, waste management & remediation sector, construction sector, accommodation & food service sector, financial & insurance sector, real estate sector, rent, leasing, employment, travel agencies & other support business sector, art, entertainment & recreation, and other services sector.

Business sectors which have had higher performance on cost efficiency are manufacturing sector, electricity & gas sector, water supply, sewerage, waste management & remediation sector, construction sector, transportation & storage sector, information & communication sector, financial & insurance sector, rent, leasing, employment, travel agencies and other support business sector, art, entertainment & recreation sector, other service sector

Business sectors which have had higher performance on competitiveness are manufacturing sector, transportation & storage sector, accommodation & food service sector, information & communication sector, financial & insurance sector, real estate sector, rent, leasing, employment, travel agencies and other support business sector, art, entertainment & recreation sector and the other services sector.

Business sectors which have had higher performance on better customer services are mining & quarrying sector,

electricity & gas sector, transportation & storage sector, accommodation & food service sector, information & communication sector, financial & insurance sector, real estate sector, rent, leasing, employment, travel agencies and other support business sector, human health and social work sector, art, entertainment & recreation sector and the other services sector.

C. Choice of Business Innovations for Next Normal

For the next normal, business need information on the best innovation choices with higher opportunity for success. The choices are based on hypothesis of this study which stated that innovations conducted by companies correlate with its business performance, or the innovations correlate with better performance. The correlation level indicated by Pearson Correlation and the significance of the correlations indicated by Product Moment. All the Pearson Correlation and Product Moment significance can be seen in Table 3 below.

TABLE 3.
CORRELATION ON INNOVATION AND PERFORMANCE

Types of Innovation	Business Innovation Performances			
	Sales Increase	Cost Efficiency	Competitiveness	Better Customer Services
Product	0,375	-0,098	0,655*	0,239
Operations	0,009	0,027	0,385	0,423
Management	-0,013	-0,026	0,256	0,602*
Marketing	0,502*	-0,084	0,732*	0,198

Source : Research calculation

*= Product moment at $\alpha = 5\% = 0,497$

- Product innovation is in strong correlation with competitiveness (0.655*) and is quite significant. The correlation with sales and better customer service is very low and there is no correlation with cost efficiency.
- Operational innovation is in moderate strong correlation with better customer service (0.423), a fair strong correlation with competitiveness and no correlation with sales and cost efficiency. All of the correlations are not significant.
- Management innovation is in moderate strong correlation with better customer service (0.602*) and significant. Its correlation with competitiveness is moderate strong, but no correlation with sales cost efficiency.
- Marketing innovation is in strong correlation with competitiveness (0.732*), moderate strong correlation with sales (0.502*) and significant, but there is no correlation and significance with better customer service and cost efficiency.

Among the four types of innovation, marketing innovation shows the strongest correlation and significant on sales increase and competitiveness. Product innovation and management innovation are significantly correlated with one performance indicator, while operating

innovation does not show a significant correlation to performance indicator.

The most significant correlation between innovations with performance is competitiveness (two significant correlations), sales increase and better customer service (only one significant correlation with innovation) and no significant correlation with cost efficiency. Cost efficiency performance still need comprehensive innovation for effective performance.

TABLE 4.
TYPOLOGY BUSINESS INNOVATION

Innovation Side	Type of Innovation	Innovation Performance
Internal	[1] Product [2] Operation [3] Management	Cost efficiency [no significant innovation]
External	[4] Marketing	▪ Competitiveness [1] [4] ▪ Sales [4] ▪ Better customer services [3]

Source : Research calculation

External oriented innovations tend to give more significant results, compared to innovations on internal oriented of business organization. Internal oriented innovation still facing uncertainty of market acceptance and significant performance. However, all the innovation did not correlate with cost efficiency, which indicate that cost efficiency is a fundamental problem. However, this conclusion still needs to be re-examined its correlation with performance achievement in the medium to long term. It is possible that the correlation is more persistent.

Regarding the next normal due to the Covid19 Pandemic, marketing innovation is the best choice of innovation to increase revenue and increase product competitiveness. The next innovation option is product innovation to increase product competitiveness.

V. CONCLUSION

1. Within 23.74% innovating business in 2019. The most common types of innovation are product innovation and marketing innovation.
2. Most effective performance of innovations are in sales increase and better customer service.
3.
 - a. Marketing innovation has strongest correlation with two type of performance (sales increase and competitiveness), while product innovation and management innovation significantly correlated with only single type performance.
 - b. The external oriented innovations tend to give more significant results, compared to pure internal innovations.
 - c. In the next normal, marketing innovation is the important innovation choice, then followed by product innovation. It is potential to increase product competitiveness and sales. Government and association need to develop supportive ecosystem of innovations in

a good governance.

d. Further research is needed to analysis other factors affecting innovation from the BPS data on detail, to find source of innovation growth.

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