

SME Innovation and Policy in Indonesia

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1. Introduction

Small and medium enterprise (SME) innovation has become a mantra for policy makers. Indonesia as an emerging market economy has proactively promotes innovation implementation among SMEs as it would lead to nation's competitiveness. Indonesia has approximately 60 million business units that can be categorized as micro and small businesses, and this is a huge number even compared to 260 million Indonesia's population. However, only small proportion of these SMEs is designed for innovation. Rather, they are mostly necessity driven SMEs which have a lack of strategy (i.e long term planning) and market expansion, for example, internationalization (Games, 2018). With this perspective in mind, policymakers need to have an appropriate approach that can exactly assist SME innovation in a more precise manner.

In general, innovation implementation is indeed dilemmatic for SMEs. As suggested by Sivadas and Dwyer (2000) innovation is costly and there is no guarantee that SMEs can successfully benefit from it. Many SMEs are having difficulties in terms of resources as they have limited resources, and innovation implementation such as digitalization and packaging innovation. However, they may not be rewarded financially in the short term, which will demotivate SMEs. In addition, SMEs in Indonesia also have to deal with an intense competition. This

is also a double edged sword for SMEs. On the one hand, competition naturally will encourage SMEs to do better. On the other hand, it seems that they are having difficulties in dealing with it. For example, many SMEs are competing in a market that is sensitive to price. If competitors especially larger companies enter this market, many SMEs will lose their competitiveness. In short, SMEs have embedded issues that influence the way SMEs respond to innovation.

The objective of this paper is to examine SME innovation in Indonesia and relate the findings with Indonesia's SME innovation policy. Problems and currently existing SME innovation would also be examined. Here the problems are derived from Global Innovation Index 2019. Further, the effectiveness of current SME innovation policy is also evaluated. Lastly, the emergence of business startups that are characteristically different from typical SMEs in Indonesia is briefly discussed.

2. Problems in SME innovation in Indonesia

2.1 Problems in SME innovation

Innovation has been found to significantly affect SME performance (Najib and Kiminami, 2011). That is why we need to specifically focus on the reason

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Table 1. Some comparisons from Global Innovation Index- Indonesia and Malaysia

	Indonesia (rank)	Malaysia (rank)
Regulatory quality	75	40
Ease of starting a business	102	94
Expenditure on education	92	56
GERD	109	23
ICT use	77	47
Logistic performance	45	40
Ease of getting credit	40	29
Employment in knowledge-intensive services	97	50
University/industry research collaboration	34	8
State of cluster development	27	8
Joint venture/strategic alliance deals	92	34
Scientific and technical publications	125	59
Creative good exports	19	1

Source: Cornell University, INSEAD, and WIPO (2019)

why SMEs are reluctant to innovate or why they are unable to do so. As mentioned previously, problems in inhibiting SME innovation are derived from the Global Innovation Index 2019. Here, there is also a comparison between Indonesia and Malaysia. This is to show in which part Indonesia is actually lacking compared to Malaysia - a country that shares similar characteristics with Indonesia, but is able to successfully increase their rank in the Global Innovation Index.

Overall, Indonesia is behind Malaysia in every single item above. For example, in terms of ease of starting a business, Indonesia was ranked 102 and Malaysia 94; and ease of getting credit, Indonesia was ranked 40 and Malaysia 29. However, these are relatively not a big difference. This means that Indonesia may not have as much of a problem in this regards. In fact, ease of starting a business in Indonesia may be not as difficult as some people expected. In particular, this is because most of the policymakers in Indonesia see quantity of business owners or startup as important issue. Likewise, Information Communications Technology (ICT) use in Indonesia sooner rather than latter will

significantly be increased as ICT penetration in Indonesia is fast.

More importantly, table 1 indicates that the biggest gap between Indonesia and Malaysia are indicators that strongly linked to knowledge and its outcomes as there has been significant gaps in terms of government expenditure on R&D, employment in knowledge-intensive services, university/industry research collaboration, state of cluster development, joint venture/strategic alliance deals, scientific and technical publications, and creative good exports. This means that there are more serious problems in relation to both knowledge input and output. R&D funding is not strongly supported by government. Furthermore, R&D that is conducted by industry is also not strongly developed. This may indicate their disbelief that R&D approach is needed and their inability to innovate continuously. Human resource quality is also an issue as knowledge workers are inadequate in SMEs. In turn, there is a lack of collaboration between SMEs and external actors that may assist them to innovate. In this case, they have limited access to, for example, universities as sources of innovation. They simply have no access

and capacity to interact with researchers from universities. This is unfortunate as they mostly have no R&D and also no assistance from universities.

A part of this problem is also due to the nature of universities themselves. Table 1 shows that universities in Indonesia are still unable to maximize their potentials. In terms of scientific and technical publications, Indonesia's universities are underperforming compared to Malaysia. This is one of the reasons why there is inadequate interaction, let alone, collaboration between industries and universities. Eventually, all of these lead to Indonesia's lower ranking in the Global Innovation Index.

2.2. Knowledge management and risk taking

In a broader sense, a lack of knowledge is significantly

related to SME innovation. This is also supported by a study by Games and Rendi (2019) that found that there are strong links between knowledge management and risk taking and SME innovation. Risk taking indicates SME owners' mentality to pursue business opportunities even if they may fail. After identifying the root of all the problems in SME innovation in Indonesia, we need some insights from SMEs regarding the way they do things in this regards. The following table includes mean results of a survey regarding knowledge management and risk taking which are based on 165 respondents of SMEs in the creative sector in Indonesia from a study by Games and Rendi (2019). Items for knowledge management were measured from items by Lopez, Peon and Ordas (2005), while risk-taking was measured from items by Shoham et al. (2012).

Table 2. Means (Knowledge Management and Risk Taking)

	Knowledge Management	Strongly disagree	disagree	neutral	agree	Strongly agree	means
1	The company is open to cooperative agreements with other companies, colleges, etc.	2	3	30	89	41	3,99
2	The company is in touch with professionals and expert technicians.	0	3	25	94	43	4,07
3	There are systematic R & D policies	1	2	42	88	32	3,89
4	New ideas and approaches on work performance are experimented continually	0	0	22	75	68	4,28
5	Meetings are periodically held to inform all the employees about the latest innovations in the company	2	3	35	86	39	3,95
6	There are individuals within the organization who take part in several teams or divisions and who also act as links between them	2	0	27	93	43	4,06
7	There are individuals responsible for collecting, assembling and distributing employees' suggestions internally	3	1	42	77	42	3,93
8	Teamwork is a very common practice in the company	0	1	17	86	61	4,25
9	The company develops internal rotation programs so as to facilitate the shift of the employees from one department or function to another	2	4	45	74	40	3,88
	Risk Taking	Strongly disagree	disagree	neutral	agree	Strongly agree	means
1	We believe that higher risks are worth taking for high payoffs	1	5	33	78	48	4,01
2	Encourages innovative strategies, knowing well that some will fail	0	3	39	82	41	3,97
3	Looking for new opportunities	0	2	39	84	40	3,98

Source: Games and Rendi (2019)

As can be seen from table 2, as respondents come from creative sectors such culinary and handicraft, they had higher score in openness to changes and team work. Lower scores come from items such as systematic R&D policies, individuals who are collecting and distributing knowledge, internal rotation programs, and risk taking strategies even if they may fail. This means that even in creative sector SMEs, it seems that there is a problem in internal knowledge acquisition and risk taking strategies. A lack of people who are responsible for acquiring and distributing knowledge represents a huge problem in innovation diffusion and implementation. There is little formal system and organizational structure that support innovation implementation as suggested by infrequent meeting and discussion regarding strategic planning. Inflexibility is also an issue in SME innovation as there is a problem in internal rotation which may indicate limited skills in human resources in SMEs.

3. SME Innovation policy

This paper identifies SME innovation policies by dividing them into two: general SME innovation policy and digital and technology startup policy. The latter represents the majority of SMEs in Indonesia. For example, tempe (traditional Indonesia food from soybean) have been produced by SMEs for a long time in Indonesia, but as suggested by Suharti, Sogiono, and Purwati (2013), there were no massive changes or product innovation for tempe even if it simply involves low-technology procedures. For digital and technology startup, there should also be different approach and this worth a brief discussion.

3.1 SME Innovation policy in general

Having identified the essence of problems in SME

innovation in Indonesia, it is important to formulate SME innovation policies that offer appropriate solutions. First and foremost, it has been identified that there is a vicious cycle of inability to benefit from external assistances. Internal SME capabilities to innovate have slowed down SME innovation. As a result, there is a lack of SME internationalization, especially in creative good export; a lack of knowledge including a lack of knowledge workers. Some policy's principles that are expected to overcome these problems are discussed as follows:

3.1.1. *Quality rather than quantity*

Previous approaches from policymakers generally see SME in Indonesia as numbers rather than specific business entities. As a result, there is one-size-fits-all approach in which top down strategy is implemented rather than bottom approach. In this case, policies are designed to prolong mediocrity as the same approach applied for all. Shane (2009) has warned the danger of quantity approach in entrepreneurship policy as quantity does not really matter in entrepreneurship. Sixty million business units of SMEs in Indonesia have not resulted in increasing the level of Indonesia's innovation and competitiveness. It is important to have a more specific approach for specific small businesses. They should be grouped into distinct categories, and are assisted based on their real and existing needs.

3.1.2 *Assisting in in business strategy*

Previous approaches were heavily focused on financial and marketing issues. This is indeed big issue in SME development. However, a study by Games (2018) has suggested the importance of SME owners as strategic thinkers. He has found that SME owners, for example, have no business model that anticipated technological changes and social changes. Many of them have no right target market

or were not willing to take risk to reach a wider market. Even if they have access to working capital, a lack of strategic thinking will reduce its benefits. Indonesia has a fast growing middle class with more demanding products. For example, more consumers demand halal and toyyiba (permissible and healthy as well as delicious). This requires highly standardized products that are systematically embraced by SMEs. In brief, SME innovation should be based on business strategy, and if this cannot be provided by internal SMEs, outsiders should do. External assistances, for example, by academicians and or social entrepreneurs who bridge the gap between SMEs and market demands, could be highly beneficial.

3.1.3 Focusing on skilled and knowledge workers

While Indonesia can no longer rely on cheap labor, there is a shortage of knowledge workers. This situation represents unclear strategy for a nation's competitiveness. This does not mean that government is not committed to education. Perhaps this is merely about not focusing heavily on increasing skills and knowledge. For example, government expenditure on education is relatively high, but inability of higher education institutions to significantly enhance their performance signifies the ineffectiveness of human resource quality policies. Malaysia has its own strategic path which is shown by Global Innovation Index, showing that they focus on science and engineering in which Indonesia was ranked 68th and Malaysia 8th (Cornell University, INSEAD, and WIPO, 2019). This means that investment in human resources is justified even if it is a long-term investment because business innovation including SME innovation simply needs knowledge workers.

3.1.4. University as a source of innovation: incubation and science techno park

University as a source of innovation in Indonesia

is manifested through the recent development of business incubators and science techno parks. These two institutions can complement each other. Business incubators strengthen startups and science techno park bridges the gap between university and industry. These two have something in common: technology based companies or startups. Having realized that university based startups are having difficulties to get working capital and continuous incubation, government should issue more incentives for technology-based startup companies. Incubators mainly those who are based in universities would help developed that are designed to conduct businesses that are derived mainly from university's research. Additionally, nineteen science techno park in universities in Indonesia have been revitalized. For a long time, patents and prototypes from university's inventors have not been managed by universities as they are more heavily focused on teaching and research. At the moment, universities in Indonesia are being also evaluated from their innovation performance. We can expect that SMEs and startup innovation in Indonesia would be partly determined by how far these universities can transform themselves as well as new and existing entrepreneurs.

3.2 Policy for Startup

This section fully focuses on a brief discussion regarding startup policy in Indonesia. This is a different perspective compared to general discussion of SME innovation in Indonesia. The emergence of startup, to be precise, technology and digital startup in Indonesia is an unprecedented phenomena. Many of Indonesia's startups have been inspired by the story of "Go-Jek" which is the Indonesia's decacorn as their valuation has reached US\$10 billion (Salna, 2019). While universities have contributed positively to technology-based startups as the government has also targeted approximately 4000 startups were born from universities in 2024, it is safe to say that startups

in Indonesia primarily has created their own path. “Young, independent, and open to changes” are the main characteristics of these startup founders and they represent the emergence of new generation (Games, 2018). Indonesia will soon be experiencing demographic bonus as currently nearly 70% of Indonesia’s population aged between 15 and 64 years old. These startup founders were inspired by Go-Jek, Tokopedia, and Traveloka, to name a few, and tried to locally validate their own digital app or IoT. From 2017 to 2018 there were about 20 digital startups that initiated their business in Padang, which is not the main source of economic growth in Indonesia. In 2019, of 20 digital startups, only three of them are survived with no sufficient revenue streams. This is to illustrate the hard path of startups in Indonesia.

The hardest challenge for startup teams is to transform their creativity to innovation. They characteristically are creative people, but may not necessarily able to enter the market phase. In this case, policymakers need to pay attention to this period. As far as author concerns, technology based startup mostly work in isolated groups. Many of them are also disconnected to business incubators and science techno parks. These startups also need working capital, but they typically have different characteristics compared to general SMEs because they most probably have no cash inflows in their first year. This is a moment of survival for them. Because of that, the government needs to provide access including financial access as they may not be compatible with conventional bank’s standard. Policymakers also need to help provide a good market ecosystem for startups. Cooperation is significantly related to SME innovation in industry clusters (Najib and Kiminami, 2011). This means that industrial clusters or innovation clusters need to be promoted in order to enhance the effectiveness and communication among stakeholders such as SMEs, academicians, and government. In many cases, clusters are not designed to innovate. In short, policymakers need to recognize the unique

characteristics of startups and approach them based on their necessities as well as facilitate resources to these SMEs.

4. Conclusion

This paper emphasizes the importance of knowledge and risk taking especially in pursuing business opportunities in dealing with SME innovation. SME need to make the most of abundant business opportunities in Indonesia. In this regard, universities can play a greater role because of their identity as a source of innovation. They need to revitalize themselves by focusing on innovation performance primarily by promoting business incubators and science techno parks. On the other hand, SMEs need to also proactively approach universities and external assistances as they have a lack of capacity to innovate.

Policymakers need to provide solutions rather than create new problems. Policymakers in Indonesia can use some principles that are identified in this paper. These are focusing on quality of SMEs rather than quantity; assisting SME business strategies, focusing on human resources quality, and maximizing the existence of universities as sources of innovation. It was also identified that the emergence of technology based startups that represent the new cohort in Indonesia’s demographic bonus era. They may also represent the future of business innovation in Indonesia. In this case, different approaches can be taken such as promoting open innovation and business partnership as well as providing access, especially for startups that are entering their first year of operation.

All in all, SME innovation in Indonesia needs a strategic path that can lead to better innovation performance and this is primarily contributed by knowledge aspect and how SMEs can seek external assistance which should be taken into consideration by policymakers.

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