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## Open Innovation Implementation to Sustain Indonesian SMEs

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### Abstract

Small and Medium Enterprise (SME) in Indonesia plays an important role in social and economic growth, due to great number of industry, GDP contribution, and total employment. SMEs' characteristic more agile and adaptable that capable to survive and raise their performance during economical crisis than larger firm. But the increasing of business competition, in particular against large and modern competitor, put SMEs in a vulnerable position. The development of sustainable SMEs becomes important step to strengthen and sustain Indonesian economy. According to previous studies, factors affecting success among Indonesian SMEs are marketing, technology, capital access and human resources quality. Unfortunately, all of these factors still becoming problem in Indonesian SMEs. Open innovation is a proposed methodology to overcome Indonesian SMEs' problem, because several Indonesian SMEs' characteristics match with open innovation implementation. The innovation value chain framework is used to explain how open innovation could help to succeed and sustain Indonesian SMEs.

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**Keywords:** open innovation; SME; sustanability

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### 1. Introduction

It has been already known that Small and Medium scale Enterprises (SMEs) in Indonesia play an important role on social and economic growth. According to the statistics (BPS & KUKM, 2004), 43.22 millions small and medium enterprises accounted 99.985% of the total number of enterprises in Indonesia in 2006. Their output contributed 53.28% of GDP in 2006, and, with over 85.42 million workers, SMEs account for 96.18%

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of the total employment in Indonesia at that year (Padmadinata, 2007). Small and medium enterprises (SMEs) including micro-enterprises form the backbone of the economy in ASEAN Member countries (SEOM, 2004). The role of SMEs become more important, because according to research by AKATIGA, the Center for Micro and Small Enterprise Dynamic (CEMSED), and the Center for Economic and Social Studies (CESS) 2000, SMEs have unique ability to survive and raise performance during economical crisis, because of their flexibility in adapting production process, ability of develop with their own capital, ability to pay high interest loan and only a little get involve with bureaucracy. With this vital position in the economy, the development of SMEs would contribute to economic and social development through economic diversification and accelerated structural changes that promote stable and sustainable long-term economic growth (Padmadinata, 2007).

SMEs have unique characteristics if compare with large company. These unique characteristics build several SMEs condition that must be considered carefully when developing them. Characteristic of small medium enterprises (Chesbrough, 2010):

- Size. Their smaller size makes smaller markets attractive to SMEs while these markets would not be attractive for larger firms.
- Focus. Their focus lets them execute very effectively against larger, diversified firms with more diffuse objectives.
- Business specialization. SMEs can specialize their business more deeply in narrow fields.
- Entrepreneurial persons. SMEs attract more entrepreneurial R&D employees.
- Speed. Smaller firms take decisions faster and implement them more rapidly.

Increasing business competition, in particular against large and modern competitors, put SMEs in a vulnerable position. In Indonesia, most SMEs operate along traditional lines in production and marketing (Indarti & Langenber, 2004). They also have several challenges such as lack of knowledge, lack of qualified human resource as well as quantity, non conducive atmosphere, lack of facility, limitation of market and information access, and bureaucracy. Considering the limitation of SMEs, especially in knowledge and resources, open innovation model will be the suitable methodology for SMEs to grow. Open innovation assumes that firms can and should use external ideas as well as internal ideas, and also internal and external paths to market (Chesbrough, 2003). This paper try to propose a strategy that can help SMEs implementing open innovation, to raise their competitiveness and sustainability, and in turn can raise national economy.

## **2. Indonesian's SME**

### *2.1. Condition of Indonesian's SME*

Based on Indonesian Presidential Decree no. 99/1998, Small Enterprise is “Small scale people economical activities with major business category in small business activities and need to protect from unhealthy business competition”. The government of Indonesia defines small enterprises as firms with total asset up to Rp. 200 million excluding land and building, the total annual sales are not more than Rp. 1 billion owned by Indonesian citizens, not subsidiary or branch of medium or large enterprise, personal firm. While medium enterprises are firms with total asset more than Rp. 200 million but not exceed Rp. 10 billion excluding land and buildings. Biro Pusat Statistik (Statistic Center Body) defined SMEs based on number of employee. Small enterprise employ 5 to 19 people, medium enterprise employ 20-99 people.

Government and private sector in Indonesia pay less attention for SMEs in Indonesia (Adiningsih, 2004) before economical crisis 1997. But since Indonesian economical crisis, most SMEs can survive, even increasing in number This condition attract government and private to pay more attention. Furthermore, most SMEs depend on their own capital, employ most workers, and contribute to economic growth (GDP) of Indonesia, make SMEs should have more attention.

In Indonesia, SMEs development conducted by Kantor Menteri Negara Koperasi dan Usaha Kecil Menengah (KUKM) (Ministry of cooperation and small medium enterprise), Ministry of Industry and Trade, Ministry of Finance and Bank of Indonesia (Adiningsih, 2004). Indonesian government uses business center and cluster to foster SMEs. Business center is activity center at certain location, where there are SMEs that are used similar raw material or facility, produce similar product and have prospect to develop as a cluster (SK Meneg KUKM no.32/Kep/M.KUKM/IV/2002).

Clusters are geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions in a particular field that compete but also cooperate (Porter, 2000). The purpose of the development is to encourage development of SMEs with technology competence, create conducive business system and climate, create SMEs operational financing assurance system, and provide technical support and managerial mentoring.

There are four types of industrial cluster in Indonesia (Supratikno, 2004). Dormant cluster is a cluster that dominated by informal sectors. Active cluster is a cluster that able to improve their technology and also their production quality, but they only sold their product domestically. Dynamic cluster is a cluster that able to improve their technology and their production quality. They also start to build networks to sell their product in international markets. Modern or advanced cluster, is a cluster that has applied advanced technology to produce their qualified product and able to sell it in either local market or global market. Most of Indonesian's cluster is a dormant cluster (Supratikno, 2004). So, our government tries to develop them into an advanced cluster. There are also some other characteristics of Indonesian's SME business center such as highest competition among industrial center member, low quality, cost and price oriented, low bargaining power to local middleman, market, low technology, low networking, low need for achievement and development.

## 2.2. *Factor Affecting Success Among SMEs*

Storey (1994) identified key components to be important in analyzing the growth of SMEs: the characteristics of the entrepreneurs; the characteristics of the SMEs; and the type of strategy associated with growth. Instead of the last component, we explore contextual elements of SME development. The theoretical framework is developed in line with these adjusted three components as depicted in Figure 1 (Indarti & Langenberg, 2004).

Success factors of Indonesian SMEs (Indarti, & Langenberg, 2004) are capital access, marketing and technology, while legality was a burden to business success. Education and source of capital were related significantly to business success. However these two seemed to need moderating variables since poor operational explanations were needed to link these two with business success. (Indarti & Langenberg, 2004).

Justification of variables determination is as follow: (Indarti & Langenberg, 2004).

- Marketing (significant positive correlation). In Indonesia, most SMEs operate along traditional lines in marketing. Stiffer competition in the market should be responded proactively by SMEs by doing market development. New market opportunities included findings new products or services to offer existing customers and obtaining new customers for existing product or services. Furthermore, market orientation, defined as organization culture creates the necessary behavior for the creation of superior value to customers, was found to be significantly correlated with company performance (Verhees & Meulenberg, 2004).
- Technology (significant positive correlation). Rapid changes in technology should be responded by the SMEs to find alternative ways to sustain their competitive advantage by deploying new process and new growth methods. In this context, technology has a close relationship with improvement of production process.

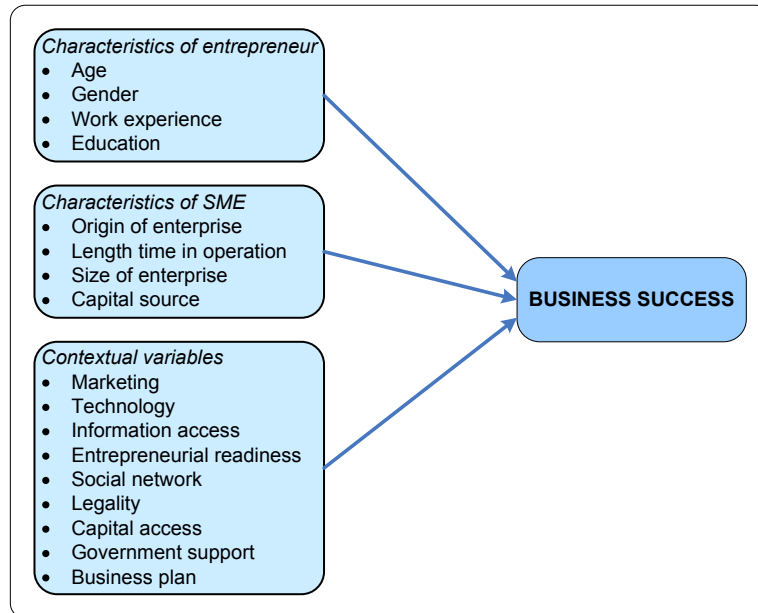


Fig. 1. Factors affecting business success (Indarti, Langenberg, 2004)

- Legality (significant negative correlation). Legal aspect in developing countries such as Indonesia is probably of hindrances of success among SMEs. In many cases, dealing with legal aspects has forced the SMEs to allocate significant amount of financial resources due to bribery practices. Legal aspect is often also used in selection operating decision in order to ensure future business success (Mazzarol & Choo, 2003).
- Capital access (significant positive correlation). As aforementioned, lack of capital is of problems faced by Indonesian SMEs (Kementerian KUKM & BPS, 2004). Hence, capital flexibility as abovementioned is of factors determining business success (Kristiansen, Furuholt & Wahid, 2003).

According to Sri Adiningsih, 2004, problem Indonesian SMEs faced are financial problems and non-financial problems. Financial problems are such as access to banking and formal capital resource, high cost transaction. Non financial problems are limitation of production technology and quality control, disadvantages in marketing, lack of human resources quality and lack of understanding about financial and accounting. (Adiningsih, 2004).

Considering slightly low explanation power of regression model (32.5%) suggested that other variables should be identified to get a more explanation of success among Indonesian SMEs (Indarti & Langenberg, 2004), and based on several researches and SWOT analysis it can be concluded that the major factors that affecting success among SMEs are capital access, marketing, technology and human resources quality.

### 3. Innovation

Innovation has contribution in a vibrant economy (Lundvall, 1998). Innovation is the critical driving force of economic growth (Schumpeter, 1934). Innovation required the ability to learn and create novel knowledge. The ability to learn and create novel knowledge is needed to face the environment uncertainty and creating value. Creating value is a key to make economic growth. Innovation also has an important role in entrepreneurship. Innovation is a new combination of factors of production that are made by entrepreneurs (Schumpeter, 1934). Innovation is the heart and the way of thinking of entrepreneurship (Drucker, 2002; Lumpkin and Dess, 1996;

Schumpeter, 1934). Innovation is the specific function of entrepreneurship whether to create resources that generate new wealth or endow existing resources that have potential to enhance wealth creation (Drucker, 2002). Firms could use innovation as a tool to face future competition (Huber, 1994; Lowendahl and Revang, 1998; Prahalad and Krishnan, 2008; Van de Ven, 1986).

Innovation is economic and social success through introduction of new ways or new combination of existing ways in the input-output transformation that significantly change the relation between utility value and price of product that is offered to customer and or user, community, society, and environment (Fontana, 2009). Innovation means firms' effort to create economic value for customer by increasing positive spread between customer perceived value and economic cost incurred by company. Firms will have a competitive advantage when they could create economic value greater than their marginal competitors in product market. Then, innovation could be a source of competitive advantage.

There are three ways to create economic value (Fontana, 2009). First, increasing customer perceived value while maintaining the rate of economic cost incurred by firm. Second, reducing economic cost incurred by firm while maintaining customer perceived value. Third, increasing customer perceived value along with reducing economic cost incurred by firm.

According to the rate of change, innovation has two basic form, radical innovation and incremental innovation (Nonaka and Teece, 2001). Radical innovation not only give raise to a new program or technology, but rather on the emergence of significant changes in the performance of existing basic tasks/activities (Mintzberg et al., 2003). Radical innovations are the result of a new standpoint of problem formulation and reaction that are different from the existing one. Incremental innovations are peripheral changes as a respond to environmental demands.

### *3.1. Value Chain Framework*

Hansen and Birkinshaw (2007) reveal that in order to enhance organization ability to innovate, manager should pay attention to innovation value chain framework. Innovation value chain framework sees the process of transforming ideas into commercial output as an integrated flow. The process of transforming ideas into commercial output has three stages. First stage is idea generation. Ideas could generate or originate from internal work unit, outside work units in an organization, or also from outside organization. In this stage, in order to innovate, organization can seek early ideas originally from inside of work unit, between work units, or out side organization. Second stage is conversion. In this stage, the early ideas that have been gathered are selected in order to choose which ideas should be financed and developed further into certain product or practice. Third stage is diffusion. In this stage, firm would spreading developed ideas within and or outside the company.

### *3.2. Open Innovation*

Chesbrough (2003), reveals that in an abundant knowledge era, firms need to utilize external ideas while leveraging their in-house R&D outside their operations. This paradigm is different from the old one, closed innovation. Closed innovation, views that a successful innovation needs control. Firm should generate their own ideas and then develop, build, market, distribute, service, finance, and support them on their own. Closed innovation, encourage firms to be strongly self-reliant because one cannot be sure of quality, availability and capability of others' ideas (Chesbrough, 2004). On the contrary, open innovation as an emerging paradigm, assumes that firms can and should utilize external as well as internal ideas then use internal and or external paths to market, as they look to advance their technology.

Open innovation is the utilization of inflows and outflows of knowledge to speed up internal innovation, and expand the markets for external use of innovation (Chesbrough, 2003). Open innovation consist of two

dimension, technology exploration or outside-in and technology exploitation or inside-out open innovation (Chesbrough et al., 2006; van de Vrande et al., 2009). Outside-in open innovation means that firms should monitor their environment to source technology and knowledge in addition to in-house R&D. Inside-out open innovation means that firms should not only rely on internal paths to market, but also look for external organizations that are better suited to commercialize a given technology. In a fully open setting, firms combine both technology exploitation and technology exploration in order to create maximum value from their technological capabilities or other competencies (Chesbrough and Crowther, 2006; Lichtenthaler, 2008). (van de Vrande et al., 2009).

In implementing open innovation, SMEs have several advantages and disadvantages. Some advantages are

- SMEs' flexibility and specificity can be advantages in accelerating innovation (Lee, Sungjoo et al., 2010).
- Few of them have sufficient capacity to manage the whole innovation process by themselves, and this encourages them to collaborate with other firms (Lee, Sungjoo et al., 2010).
- SMEs tend to have a higher R&D productivity than larger firms (Lee, Sungjoo et al., 2010).
- Structural advantages of smaller firms, and how these attributes can be harnessed to provide new opportunities for SMEs in an open innovation world (Chesbrough, 2010):
  - Large companies increasingly are interested in collaborative innovation partnerships: Smaller firms with strong competences in focused specialties make attractive collaboration partners for larger firms.
  - Large companies creating technology platforms and actively recruiting SMEs to develop products for these platforms: Platform leaders provide extensive technical information, co-marketing opportunities and even occasional subsidies for smaller firms' R&D costs.
  - User innovations: SMEs are active users of many new technologies and may develop important enhancements for these technologies that improve the quality or capability of a technology. Many large companies are eager to join these open innovation communities.
  - Globally successful SMEs, which also are known as "hidden champions" because of their high profitability, have developed a niche strategy as the source of competitive advantage: They work in narrow market segments where large firms are not interested because of the limited market potential.
  - Open-source development provides benefits for the innovation efforts of all firms independent of their size.
  - Open innovation fundamentally is about the greater intrusion of markets into the processes of R&D: SMEs have a greater ability to specialize than larger firms, and this specialization is more helpful precisely when markets are more available for innovative activities. Internally organized activities are restricted to a single captive customer in a single market. Open innovation activities seek to cultivate multiple customers in multiple markets for that innovative activity, spreading costs and risks of adoption more widely.

In contrast, some disadvantages are faced by SMEs to innovate and to implement open innovation:

- SMEs is hampered by lack of financial resources, scant opportunities to recruit specialized workers, and small innovation portfolios so that risks associated with innovation cannot be spread (Vreska, et al., 2009).
- SMEs need to heavily draw on their networks to find missing innovation resources, and due to their smallness, they will be confronted with the boundaries of their organizations rather sooner than later. (Vreska, et al., 2009).
- Four major unmet needs of SMEs to innovate (Spitzley, Rogowski, Garibaldo, 2007):
  - Understanding the business impact of Innovation Management: Enterprises show a lack of focus on business impact. This keeps SMEs from improving Innovation Management performance.
  - Keeping the strategic positioning in mind while eliminating operational short comings: SMEs tend to focus on operational improvements first, before improving their strategic positioning.
  - Build cross-border networks: Due to the increasing globalisation, SMEs need to develop cross-border networks. This becomes difficult as often they lack of international expertise.

- Accelerate the commercialization of ideas: Although SMEs often have excellent ideas for new product or services, it takes too long to commercialize these ideas. This is often due to limited support for developing and implementing business plans.
- Structural deficiencies of SMEs posed by open innovation are (Chesbrough, 2010):
  - Lower absorptive capacity: SMEs typically do not have the ability to support dedicated resources and personnel to build structures to identify useful external knowledge.
  - SMEs frequently lack the ability to absorb external ideas and technologies, even when they are initially identified and transferred. Many SMEs do not have personnel with the required scientific background to understand, absorb and exploit the scientific discoveries and technologies that are developed at universities, research labs or inside large companies.
  - Smaller firms often are unattractive as partners to others.
  - SMEs typically do not have the market power to capture the value of their externally sourced knowledge and innovation, if not protected by intellectual property rights (IPRs).

#### 4. Discussion

Considering important role of SMEs, especially in Indonesia as mentioned above, developing SMEs become an important step to improve Indonesian economic and social condition. Innovation is one of strategies to develop and raise competitive advantage. Encouraging innovation in SMEs is central to policy initiatives for stimulating economic development at the local, regional, and even national levels (Lee Sungjoo et al., 2010). Many firms started to implement open innovation as a necessary organizational adaptation to changes in their environment (Chesbrough, 2003). The other motives were enterprises may engage in collaboration to acquire missing knowledge, complementary resources or fund, to spread risks, to enlarge its social networks, or to reduce costs (Hoffman and Schlosser, 2001; Mohr and Spekman, 1994).

Ideas and studies about open innovation start in high technology industry and large company, and opening up the innovation process are widely accepted among large firms, e.g. Philip, Xerox, Eli Lilly, BASF, and Procter & Gambler (Chesbrough, 2010). The benefits of open innovation are also widely accepted in the software development community (Chesbrough, 2010). One of the main advantages is that organisations can benefit from their wide range of experts (Whitla, 2009). Companies or individuals from the outside of the organisation can create innovative ideas for a company (Chesbrough, 2006).

Open innovation helps small and medium enterprises (SMEs) mostly in technology exploitation, like commercialisation because, while many of them have superiorities in technology for invention, they often lack the capacity in terms of manufacturing facilities, marketing channels and global contacts to introduce them effectively to the innovation market (Narula, 2004). But, to develop Indonesian SMEs, due to the condition, open innovation implementation is needed in either technology exploration or technology exploitation as well. Moreover, we use innovation value chain framework especially in idea generation stage and idea diffusion stage to explore the role of technology exploration and technology exploitation in implementing open innovation.

The first stage in innovation value chain is idea generation. Technology exploration means that idea is generate from outside of the firm. Technology exploration is needed by Indonesian SMEs because based on the study by KUKM 2005 Indonesian SMEs still have lack of ideas, lack of partnership outside their cluster, and business development service that have not play optimum role in SMEs development, because lack of link and match. Then, after a SME select and develop which idea they considered, they enter the idea diffusion stage. Technology exploitation means that external channel to market are used in idea diffusion stage. Technology exploitation is needed because SMEs in cluster too much lean on middleman, then SMEs have no access to market themselves. This condition weaken SME's bargaining power, and in the long term, as globalization became wider and stronger, Indonesian SMEs will face stronger competitor, for example China, that sell

cheaper or better product, and dominate the market.

To implement open innovation, Indonesian SMEs have several disadvantages such as,

In technology exploration,

- According to the study by KUKM, 2005, most Indonesian SMEs use ‘me too’ strategy, that follow others’ idea, either from domestic firm or foreign company. In the past time, this strategy works because there are few imported products in Indonesian’s market. Now, when other countries do ‘me too’ strategy and sell the product to Indonesia with relatively low price, SMEs that use the same strategy can’t compete in price and time to market. This condition forced SMEs to become more innovative.
- SMEs mostly do not have well access to information that can open their mind and trigger them to a new ideas and innovation.
- SMEs have relatively low absorptive capacity to adopt knowledge and technology in innovation process and production operation optimization cause process inefficient, ineffective and not productive. They tend to use traditional and conventional knowledge and technology in production operation, that cause longer time to market, limited production capacity, longer production time, low and inconsistent quality of product, and inefficiency in resources use. This condition also can cause SMEs not attractive for larger firm to make partnership.
- SMEs mostly don’t have educated personal enough that can absorb and adopt several methods or technologies that can improve their performance. The lack of educated personal in SME also can cause lack of entrepreneurship motives to develop their business larger and larger. Sometimes they were satisfied enough with what they have got at present.
- SMEs often problem with intellectual property rights (IPRs), especially if they innovate from external ideas or technology. The ideas can easily and quickly copied by other firms. On contrary, they do not have enough knowledge and money to get IPRs.
- SMEs have not open access to market, so they don’t have knowledge about market, what their market needs, wants, and likes, how they buy, how much they buy, how much price they accept, etc, that cause SMEs rarely have innovation ideas, and it’s difficult to innovate. This cause innovation becoming rare and if there, maybe the innovation not success because not fit with customer’s voice.

In technology exploitation

- Indonesian SMEs mostly lack of information, and also relatively lack of promotion. Because of such condition, partnership opportunities with large company and other countries are low. The other reason for lack of partnership is sometimes SMEs not attractive enough for larger firms because of their low capacity and consistency.
- The condition in Indonesia nowadays, SMEs are more compete to each other in a cluster and tend to do unhealthy competition with lowering price. This condition will worsen the SMEs condition because the reason that government makes a cluster is to force cooperation to raise their bargaining power in several area such as economies of scale in buying raw material together, but with the unhealthy competition their bargaining power decreased.
- SMEs also rely heavily on middlemen and have little interest and information about markets. In the short term, this situation makes SMEs more convenient because they do not have to think how or where to sell their product. But, in the long term, this situation will threat them because they become dependent to the middlemen and their bargaining power decreased.

To help SMEs implement open innovation, we build a model modified from the model introduced by Lee, Sungjoo et al., 2010 due to Indonesian SMEs condition, as shown in figure 2. For technology exploration, Indonesian SMEs needs networks with local government, university, non profit research center (such as Indonesian Institute of sciences), other SMEs as cluster and also larger or foreign firm to make a network to help SMEs developing their business process.



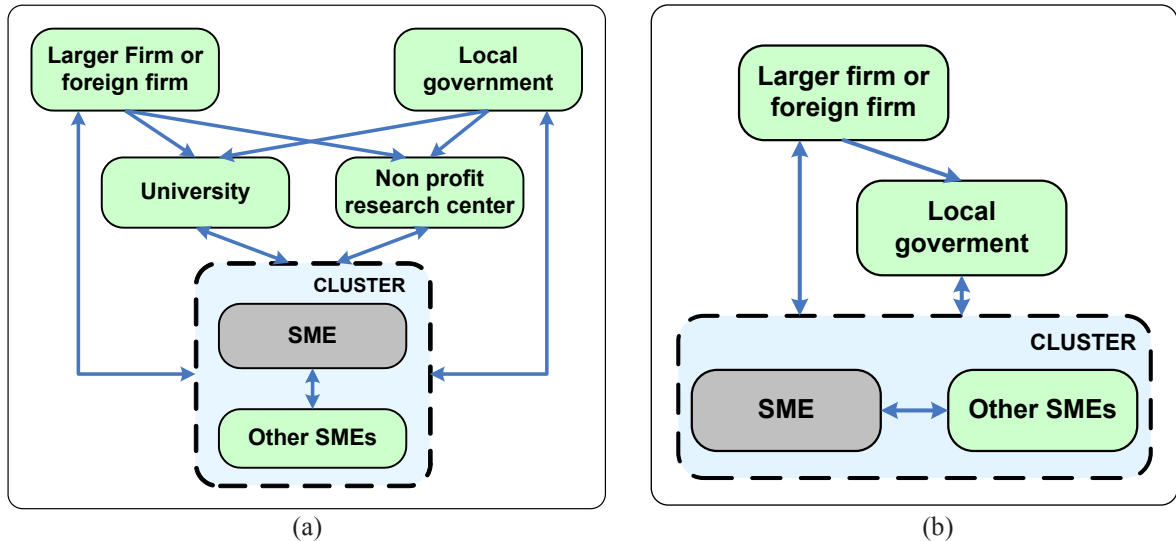


Fig.2. (a) Technology exploration model; (b) Technology exploitation model

Based on value chain framework, first stage is idea generation, including new product idea generation, production process, technology, etc. In product design stage, non profit research center and university take role as information supplier for SME. To create new design, SME needs enough insights to trigger ideas for innovation. They also need knowledge about market, such as who are they, how they buy, what they like and want, where are they, what feature important for them, how much price they’ll accept, etc. Non profit research center and university shall gather data and information from trade association, local government, larger or foreign firm, include gathering direct data from any sources and do research about market, and other sources, select the appropriate data, process, research and interpret them all, and prepare them for SME as a suitable and acceptable information and proposal. SME mostly need help in this area due to their lack of educated person.

In production process stage, university can help SME to supply knowledge and technology that they need to produce. Here, university shall help to supply them in simple and suitable form, and maybe university must do research to modified to match knowledge and technology, in order to help SME to absorb it well, with all their limitation in personal capacity, financial, facility etc. University need to do research to bridge knowledge and technology from ideal and sophisticated term into simple and user friendly term, and to make sure that SME can use them without any significant difficulties. With implementation of knowledge and technology that have been “modified” to meet SME condition, hopefully SME can benefit from larger capacity, shorter production time, better quality and it’s consistencies, better efficiency and productivity, that makes them have better competitive position. The better condition of SME, also hopefully can attract larger and foreign firm to make partnership with SME.

Another form of university and local government’s role is to make benchmarking system among SMEs. Benchmarking is one of successful method to boost Japan’s development. With benchmarking, SMEs can share their best practice and their difficulties, limitations or needs each other. With this system, SMEs can learn and adopt the best practices that have been modified to suit their own condition. Benchmarking also create partnership among SMEs, since each SME tend to have a unique skill. SMEs can help and completed each other in several areas, e.g. SME with over capacity demand can subcontract to other SME, SME that has specific skilled person and has unsigned capacity can help other SME.

In sustainability and further development, SME needs to have tough, creative and achiever entrepreneur. To help them, university can make any event or session to raise awareness, entrepreneurship and development motives of SME owner and manager. University need to design suitable content and method to make sure that content can successfully be delivered to entrepreneur and encourage them to develop their business continuously so that SME would sustain their performance.

Role of local government in open innovation is creating any policies related to SMEs to ease university and non profit research center gathering data and access to SMEs, and also make regulation and policy for benchmarking system.

For technology exploitation, SME needs to build a network with other SMEs, local government, larger or foreign firm and university to strengthen their cluster. In diffusion stage of value chain framework, local government must take role to help SMEs, especially in distribution channel. Local government shall make any event such as open house and fair to introduce and promote local SMEs products. These events also can open access to make partnership among SMEs and with larger or foreign firm. Local government also play important role to invite potential larger or foreign firm, and make any discussion about SMEs to increase partnership.

Partnership and benchmarking among SMEs, in a cluster, will give them mutual benefit by helping and supporting each other, knowledge and technology sharing, capacity raising, production process enhancing, marketing, pricing, etc. Partnering among SMEs also raise their bargaining power among their supply chain network.

SMEs need assistant to make and run system that following up intra cluster cooperation and partnership between SMEs, and monitoring relationship or partnership with larger or foreign firm. The assistant must help SMEs to solve and meet partnership requirement and overcome their disadvantage or problem. This system is needed to make sure SMEs can meet partnership requirement, can do partnership without any significant difficulties, benefit from the partnership, and the partnership will sustain. This role can do by business development service which can be held by university or non profit research center, non governmental organization, local government or combination among them.

## 5. Conclusion

Open innovation has already applied to foster foreign SMEs developing. In Indonesia, open innovation would encourage the developing of SME business center into an advanced cluster. Indonesian SMEs need to implement both of technology exploration and technology exploitation form of open innovation. The role of government, universities, non profit research centers and business development service are needed to help Indonesian SMEs to implement open innovation. Open innovation will generate sustainability and create SMEs competitive advantage.

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