Synergistic Partnership Model for Value Creation (Preliminary Study)

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ABSTRACT

Purpose: This study is a preliminary study conducted to identify the various parties that can be involved in supporting the development of SMEs, because researches that have been done in Indonesia show that the actors mentioned in Triple Helix Model is considered not enough.

Design/methodology/approach: An examination of the literature was undertaken to review the studies on Triple Helix. The selected articles were classified by themes and analyzed accordingly.

Findings: This study finds literature gaps and summarizes the various parties that can be involed to support cooperation between government, university and SMEs according to the researchers.

Originality/value: This study providing input for the revision on the Triple Helix Model.

Paper type: Literature review

Keywords: Innovation, Value creation, SMEs, Open innovation, Triple Helix.

1. INTRODUCTION

Innovation is decisive factor in developing and enhancing the competitiveness of a business that encourages sustainable growth and knowledge economy creation. However research at embroidery center Kawalu, Tasikmalaya show that SMEs possess limitations, such as low education level, poor entrepreneurial spirit and the inability to read market movements, therefore cannot generate purposeful ideas targeted at specific market. Moreover, in contrast to large businesses which supported by strong funds to conduct product research and development, SMEs have limited funding and resources to innovate.

Lot of research suggests that SMEs should innovate differently from large companies. SMEs should focus on buildings network with customers, suppliers, other companies, government and universities, because SMEs have the greatest positive impact on their value creation when collaborating with other parties. Various synergistic concept like value co-creation, co-productivity, co-opettition, and co-destiny show how collaboration can be done to reduce the costs needed to innovate and create value.

Triple Helix Model

Among various innovation models, Triple Helix Model (THM) which proposed by Leydesdorff and Etzkowitz described interactions between university, industry and government in innovation and development process (Etzkowitz & Leydesdorff, 1995). The phenomenon of triple helix system has been recognised widely in developed countries as it has emerged from the needs of universities to work closely together with industry and to maintain sustainable development of industry-university integration, and supporting role of government as a policy maker. University-industry-government interaction is the key to improve the condition for innovation in a knowledge-based society where the university as a source of new knowledge and technology (e.g. center of excellence); industries are the locus of production and provider of customer demand; and the government as the source of contractual relations that guarantee stable interactions and exchange (Etzkowitz & Mello, 1994). Universities are interested in the 'novelty production' of knowledge. Industry enterprises are interested in 'wealth generation' within business solutions, which means better economic performance of their operations. Governmental bodies are interested in 'public control'; 'public wellbeing' in society (Silvisius & Schipper, 2014).

The three participating groups in THM typically have different interests (Leydesdorff & Meyer, 2006). They are assumed to interact in a network in which mutual adaptations lead to advantages and in which synergies from pooling assets and competencies become more important than independence. University and firms are assumed to possess complementary knowledge, whereas governments can help create new markets or change the rule of the game. As the model evolved, government's role is not only as a support act anymore but also as an active actor in the triple helix model (Etzkowitz & Leydesdorff, 2000).

The importance of THM has expressed by several researchers. Haas, *et. al.*, point out that in a predominant knowledge society, the Triple Helix concept assumes that more intensive collaboration of universities, private sector and government leads to innovation and economic development (Haas, Meixner, & Petz, 2016).

Triple Helix network of bi- and trilateral relations among universities, industries, and governments can be considered as an ecosystem in which uncertainty can be reduced when functions become synergetic (Ivanova & Leydesdorff, 2014).

Research shows that Triple Helix encourage inovation, and SMEs can be involved (Brink & Madsen, 2016). Through cooperation these actors can pool resources and agree on joint priorities, and new innovative solution can be created in the compromise situation that arise. Because several sectors of society are involved in this process, access to a wider range of knowledge is expected, enabling better problem solutions and increasing the legitimacy of the outcomes (Lundberg, 2014).

Some of creative industries drivers can be influanced by government, some by industry. The interactions between different players, such as industry, university and government, are key areas, and the classical THM can be applied (Colapinto & Porlezza, 2012).

2. RESEARCH GAP

Triple Helix Model Implementation in Indonesia

THM was declated important in various studies, however some studies in Indonesia found that THM did not work well in its implementation, as well as what is found in Kawalu Embroidery Center, Tasikmalaya.

Research conducted by in-depth interview shows the role that has been done by government in the form of providing training and oportunities for SMEs to attend industry exhibitions for free, as well as through regulation that require public servant to use embroidery products on certain days as uniform, and regulation so that SMEs can get easier access to get loan from bank are not perceived as meaningful support by SMEs.

Similary with that, what have been done by university also has no significant impact. Although it is realized that SMEs have an important role in promoting people's economy but there is no significant cooperation between various parties to promote SMEs.

To understand how cooperation between various actors should be drawn up so that value creation by SMEs can be promote, it will be studied research on application of THM in other areas in Indonesia.

The following section indicate various research about THM in Indonesia from time to time. A review of research of THM implementation in Indonesia is expected to open insight in what is being studied.

Irawati (2006) conducted a conceptual and theoretical analysis on the implementation of THM in Indonesian. She discussed the essential stages required to establish a synergy between three different actors, mainly the role of university in providing help for SMEs in Indonesia together with the government or other institutional developing agencies through a cluster-approach interactions, as exemplified by ITB and Gadjah Mada University. She also highlighted that universities in Indonesia, through the triple roles of a university called as the "Tri Dharma Perguruan Tinggi", which are education, research and community service, tried to improve the quality of the university's role in advancing the education in Indonesia alongside the industry sector and the government. This means that ideally a university work together with industry as a business partner to produce applicable science and technology for the betterment of society, with the role of government to provide relevant policies and incentives (Irawati, 2006).

Research in Indonesia shows that 90% of businesses outside agriculture are SMEs, and thus the largest source of employment. Given the important role of SMEs in economic development and equitable distribution, government has launched various programs to support the development of SMEs. However, in its implementation, the effectiveness of government programs in supporting SME development program is still low (Tambunan, 2007).

Moeliodihardjo & Soemardi made conclusion of their study that currently the government, universities, and industries are still in their respective institutional spheres in Indonesia, and a strong commitment as well as hard work are needed to develop the knowledge, consensus, and innovation space. Much progress has been made in the past decade, with a wider range of partnerships emerging, and with more institutions building capacity to play a more proactive role in fostering better relationships. A decade of exploration has seen some successes, but there is growing awareness amongst university community also that much more needs to be done, and that it is not easy to do so. Broadly, the directions that Indonesia needs to move

appear reasonably clear. All three institutional spheres require further development before each can take purposeful action. The government needs to be able to develop effective policies that are implementable, and not at odds with the prevailing legal framework. The universities has to develop institutional capacity to opearated strategically. Indonesia must at least have a small critical mass of industrial firms that are ambitious enough to develop into knoweldge-based industry (Moeliodihardjo & Soemardi, 2012).

In a study conducted in Central Java, Indonesia, Suliyanto found that collaboration between academics, government and SMEs actors cannot run well because even communication between government agencies, between universities and between SMEs itself are also very weak. In the field also found overlapping of activities, programs and budgets are still frequent because their implementation without institutional coordination (Suliyanto, 2013).

Some think that Triple Helix is nothing more than political rhetoric because it does not provide a methodological basis for analyzing the dynamics of innovation that occurs between industry, government and university. This concept does not explain an adequate link between the three actors and not accompanied by a conceptual framework of how to make this link work effectively. The process by which these links work properly remains a "black box" (Amir & Nugroho, 2013).

Mulyana examined the effect of Quadruple Helix (which is the revision of THM consisting of intellectual, government, business and civil society) to enhance the creativity and innovation capability, and its impact to competitive advantage on fashion sector in Central Java. He stated that implementation in the field shows the four actors have not been able to do a good collaboration to support the growth of creativity and innovation (Mulyana, 2014).

Based on researchs that has been reviewed above, the literature gap was found. There are a differences results on THM implementation in Indonesia and what it should be as stated in the study abroad. Therefore, then will be studied various researchs which showing various actors who are considered to be able to support THM.

3. LITERATURE REVIEW

Actors that are Deemed Capable to Complete THM

Literature gap encourages research to find out the posibility of involving other actors to suport THM implementation in Indonesia. This is consistent with what Leydesdorff said that empirical experiences show that more helices provide richer details in several cases. The triple helix indicator may be expanded algorithmically; for instance, using local-global indicators as a fourth dimension or more - to the point of N-tuple helix (Leydesdorff, 2000).

Government

In his studies about Triple Helix, government is the main actor in supporting innovation (Leydesdorff, 2000; Leydesdorff & Meyer, 2006; Leydesdorff, 2003; Leydesdorff, 2011). This opinion is futher support by various other research. A very important aspect to consider in determining the success of Triple Helix is the role of government (Natario & Couto, 2012). Government should play a major role in educating SMEs and facilitating them to access necessary resources (Chittihaworn, 2011). Government must play an active

role in providing entrepreneurship training for SMEs and facilitate that people from low socioeconomic level so can be out of poverty (Mensah & Benedict, 2010).

University

The role of university in Triple Helix will consider institutional and productive contexts. It will certainly different from each other. When analyzing knowledge spaces some important elements should be taken into account, such is the capacities of the firms, the existing informal relationships and the kind of knowledge that is in exchange between a university and their surrounding firms. Research in Spain finds many companies maintain informal contracts with universities because universities are seen to be helpful in many areas, especially in research and development and in developing projects with high scientific content (Fernandez & Merchan, 2016).

For SMEs, mentoring by university is one things that proved to have a positive impact on the company's performance (Brien & Hamburg, 2014). In addition, mentoring programs do not require large resources and cost effective (Powell, 2012).

Since the funding to research is essentially public, the linkage between business and universities is also affected. The university's functions as "helper" in a THM where the government acts as the engine and dominant helix (Manuela, 2012).

Civil Society

As has been pointed out in the previous section, some view the model of Triple Helix innovation needs to be refined. The Quadruple Helix innovation model revised THM by adding civil society (Afonso & Monteiro, 2012; Carayannis & Campbell, 2009; Caraynnis & Campbell, 2010).

Civil society as the user of goods and services or economic output is considered to have an effect on the development of SMEs. His dynamically changing behavior will encourage business actors to creatively create something new according to customer expectations (Mulyana, 2014). In research on the creative industry fashion sector, Mulyana also stated that civil society has a big role and can become a communication media of the products produced. Civil society can be a communication medium which capable to encourage potential customers to use and take pride in domestic products (Mulyana, 2014).

Research in Denmark shows that civil society is not the basis of innovation development but the actors themselves. The strategy maker must involve consideration of civil society in taking policy and making decisions (Yang & Holgaard, 2012). What is found by Yang is in line with what Leydesdorff stated, that civil society is the medium in which Triple Helix works, therefore in the view of Leydesdorff, it should not be included as one of the actors in the innovation model (Leydesdorff L., 2011).

Financial Institution

Although not mentioned as one of the actors in the Triple Helix and Quadruple Helix models, studies have shown the importance role of financial institutions in supporting SMEs development. As mentioned in the previous section, funding is a problem for most SMEs. The limited ability to access fund from banks has caused SMEs to operate with higher capital costs, or can not accept orders in larger quantities because they can not afford raw materials.

Research conducted by Duan shows SMEs must bear high transaction costs when making loans to the bank. The incomplete information and information asymmetry, management style, characteristics and behavior of SMEs actors also greatly influence the bank's decision to channeling credit to SMEs. SMEs are in an inferior position in credit screening because in addition to the above considerations, SMEs face greater risks in operations. SMEs usually only survive in a short time. Research in China estimated that almost 23.7% of SMEs disappear within the first two years and almost 52.7% out of the market in four years due to business failure, bankruptcy or other reasons (Hongbo Duan, 2009). Research in Pakistan also shows that SMEs experience barriers in accessing credit, but after reforms in 1990, SMEs have grown very fertile and development naturally led to higher external financial demand (Abubakr Saeed, 2015).

Research on SMEs in East and South Asia shows that the ability of SMEs to grow, maintain and strengthen themselves is determined by their capacity to access and manage finances. Unfortunately SMEs faces serious problems in accessing financial resources. The ability of SMEs to increase capital relatively is the key of success of SMEs (Abe & Troilo, 2015).

Research in Croatia also found that SMEs bear higher borrowing costs compared to large companies. Therefore, this study recommends a thorough re-examination for the interests of SMEs in Croatia so that SMEs can get a fund allocation loan with more efficient cost. Therefore, the government should stimulate lending to SMEs (Kundid & Ercegovac, 2011).

What is suggested by Kundid, has been applied in Indonesia. The Government recognizes the important role of financial institution in supporting SMEs by requiring the Bank to allocate 20% of the credit disbursed for the development of SME by 2018. One study that mentions the need to involve finance organizations to encourage revenue growth and commercialization is stated by Colapinto & Porlezza, 2012. They even claim that Triple Helix describing a knowledge-based economy needs to be revised by involving finance organizations to become Quadruple Helix. (Colapinto & Porlezza, 2012).

Customers and Suppliers

In his research, Hossain stated that there are still many unclear factors related to the SMEs succsess, but research has repeatedly confirmed the importance of open innovation for the development of SMEs (Hossain & Kauranen, 2016). In this open innovation SMEs collaborates with various parties, especially with suppliers and customers (Hemert, Nijkamp, & Masurel, 2013), but SMEs builds more cooperation with customers than with suppliers (Theyel, 2013). Theyel further explained that SMEs are more innovative when collaborating with suppliers to improve production processes. While in terms of product development, SMEs are more collaborative with customers (Theyel, 2013; Hossain & Islam, 2016).

Based on data collected from 605 SMEs in the Netherlands, it is known that SMEs collaborate with external parties, especially in activities related to the market, such as in an effort to meet the demands of consumers and in an effort to remain competitive (Vrande & Jong, 2009).

Various researches on customer value also show that attention to customer value has a direct impact on customer behavior because it increases loyalty which in turn results in better financial performance. Predictions on what customers perceive to be valuable will promote sustainable competitive advantage, as an understanding of customer value will enable the company to meet customer expectations and needs but with more efficient utilization of resources (Ulaga & Chacour, 2001). Knowledge and cooperation

with customers is important to determine marketing strategy because knowledge and cooperation with consumers is the basis for the prosperity of the company (Klanac, 2013).

Other Parties that are Deemed Capable of Supporting UMKM

In some studies on SMEs, it is mentioned also about the role of other parties outside the above mentioned ones (ie government, university, civil society, financial institution, consumer and supplier) such as professionals and advisers who can support the development of SMEs (Chittihaworn, 2011).

Research conducted jointly with SMEs in Australia shows that very few SMEs directly collaborate with universities or research institutes, most of SMEs are more comfortable working with consultants or research staff (Zubielqui, Jones, Seet, & Lindsay, 2015).

The importance of the association of SME entrepreneurs in supporting their development is expressed in research conducted in UK and European Union. Employers' associations are said have a potential role in increasing the participation of SMEs in public programs for innovation and knowledge-supported policies (Vega, Brown, & Chiasson, 2012)

One study conducted in China highlighted the financial problems faced by SMEs in developing their business and difficulties for accessing loans from banks. To overcome this problems, research shows the important role that can be played by the loan guarantee institution. Yet even though the financial guarantor institution can overcome this, research shows that in order to work more efficiently, it is better for the bank to exercise its own control and not rely on the loan guarantee institution (Hong & Zhou, 2013).

4. CONCLUSION

Based on literature study, it can be concluded that there are various parties that can be involved to support the development of SMEs, namely government, university, civil society, financial institution, customers and suppliers, professionals and advisers, consultants or research staff, association of SME entrepreneurs, and financial guarantor institution. Table 1 below shows a summary of the actors who are considered to be able to support SMEs' value creation.

Table 1
Table of the actors who are considered to be able to support SMEs' value creation

| Actor	Research	Finding
Government	Leydesdorff, 2000; Leydesdorff & Meyer, 2006; Leydesdorff, 2003; Leydesdorff, 2011.	Government is the main actor in supporting innovation
	Natario & Couto, 2012.	A very important aspect to consider in determining the success of Triple Helix is the role of government.
	Chittihaworn, 2011.	Government should play a major role in educating SMEs and facilitating them to access necessary resources.
	Mensah & Benedict, 2010.	Government must play an active role in providing entrepreneurship training for SMEs and facilitate that people from low socioeconomic level so can be out of poverty

(Contd...)

Actor	Research	Finding
University	Fernandez & Merchan, 2016.	Many companies maintain informal contracts with universities because universities are seen to be helpful in many areas, especially in research and development and in developing projects with high scientific content.
	Brien & Hamburg, 2014	Mentoring by university is one things that proved to have a positive impact on the company's performance.
	Powell, 2012	Mentoring programs do not require large resources and cost effective.
	Manuela, 2012	The university's functions as "helper" in a THM where the government acts as the engine and dominant helix.
Civil society	Afonso & Monteiro, 2012; Carayannis & Campbell, 2009; Caraynnis & Campbell, 2010.	Triple Helix innovation needs to be refined. The Quadruple Helix innovation model revised THM by adding civil society.
	Mulyana, 2014	Civil society as the user of goods and services or economic output is considered to have an effect on the development of SMEs. His dynamically changing behavior will encourage business actors to creatively create something new according to consumer expectations.
	Leydesdorff L., 2011	Civil society is the medium in which Triple Helix works, therefore it should not be included as one of the actors in the innovation model.
	Yang & Holgaard, 2012	Civil society is not the basis of innovation development but the actors themselves.
Financial Institution	Hongbo Duan, 2009	SMEs must bear high transaction costs when making loans to the bank. The incomplete information and information asymmetry, management style, characteristics and behavior of SMEs actors also greatly influence the bank's decision to channeling credit to SME.
	Abe & Troilo, 2015	The ability of SMEs to increase capital relatively is SMEs' key of success.
	Kundid & Ercegovac, 2011	SMEs bear higher borrowing costs compared to large companies. Therefore, re-examination for the interests of SMEs is recommend.
	Colapinto & Porlezza, 2012	Triple Helix describing a knowledge-based economy needs to be revised by involving finance organizations to become Quadruple Helix.
Customers and Suppliers	Hossain & Kauranen, 2016; Hemert, Nijkamp, & Masurel, 2013.	Research has repeatedly confirmed the importance of open innovation for the development of SMEs. In this open innovation SMEs collaborates with various parties, especially with suppliers and customers.
	Theyel, 2013; Hossain & Islam, 2016	SMEs are more innovative when collaborating with suppliers to improve production processes. While in terms of product development, SMEs are more collaborative with customers.
	Vrande & Jong, 2009	SMEs collaborate with external parties, especially in activities related to the market, such as in an effort to meet the demands of consumers and in an effort to remain competitive.
	Ulaga & Chacour, 2001	Predictions on what customers perceive to be valuable will promote sustainable competitive advantage, as an understanding of customer value will enable the company to meet customer expectations and needs but with more efficient utilization of resources.
	Klanac, 2013	Knowledge and cooperation with customers is important to determine marketing strategy because knowledge and cooperation with consumers is the basis for the prosperity of the company.

(Contd...)

Actor	*Research*	*Finding*
Professionals and advisers	Chittihaworn, 2011	Professionals and advisers can support the development of SMEs.
Consultants or research staff	Zubielqui, 2015	SMEs in Australia shows that very few SMEs directly collaborate with universities or research institutes, most of SMEs are more comfortable working with consultants or research staff.
The association of SMEs entrepreneurs	Vega & Brown, 2012	The importance of the association of SME entrepreneurs in supporting their development is expressed in research conducted in UK and European Union.
The loan guarantee institution.	Hong & Zhou, 2013	The financial problems faced by SMEs in developing their business and difficulties for accessing loans from banks can be overcome by the loan guarantee institution.

As stated at the beginning, this research is a preliminary research based on literature to find actors who can work together to support SMEs' value creation at Kawalu Embroidery Center, Tasikmalaya because THM did not work properly in implementation level. However based on observation that have been made, by considering the environmental factors and SMEs' entrepreneur behaviour, the actors who may involved should be government, universities, financial institution, customers, the association of SMEs entrepreneur, and SMEs itself. Therefore, the cooperation between actors to support SMEs' value creation can be drawn as Figure 1.
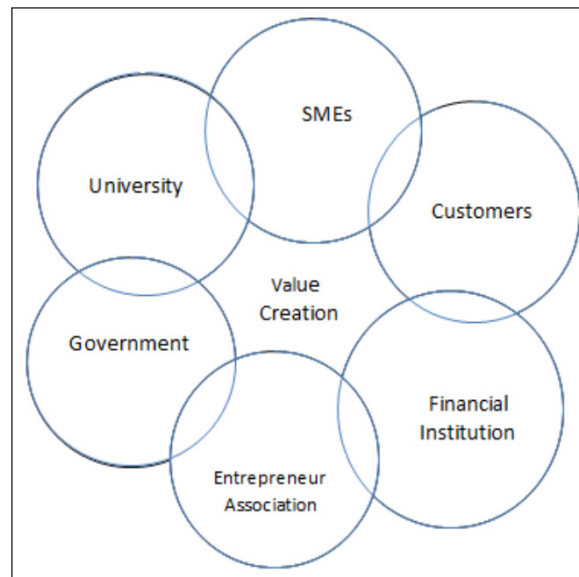
Figure 1: The actors who are considered to be able to support SMEs' value creation

In this case, supplier do not give much influence of SMEs' value creation and development because since the industry started 20-30 years ago nothing change about their relation, SMEs tend to only become customer and do not make special request or input to spuplier, so that the raw material used have not change a lot too.

Professional, adviser or consultant and reseach staff is not known because the scale of industry is small and still managed individually. To know the real situation empirical research will be done at a later stage.

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