Collaborative Network: Bringing Co-Innovation to Competitive Creative Industries in the ASEAN Economic Community

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ABSTRACT
The implementation of the ASEAN Economic Community (AEC) encourages entrepreneurs to expand their market. For countries with unstable industries, particularly Small Medium Industries (SMIs), AEC offers a challenge and an opportunity to develop a competitive advantage through innovation. This study observed the importance of creating a collaborative network and optimizing open sources for SMIs to stimulate innovation through co-innovation. This process aims to create value proposition to easily access and enter the ASEAN free market. The main objective is to understand the implementation of a collaborative network model to increase the degree of internationalization. Data was collected from 80 companies in the creative industries in Indonesia using random sampling technique. A total of 65 companies accomplished the surveys. Four hypotheses were developed and assessed. The SEM Partial Least Square was used to capture the degree and interrelation power among the factors involved. Results indicated that the success of increasing business intensity to international market was greatly determined by co-innovation, which can deliver value in the aspects of uniqueness, creativity, and quality.

Keywords: Collaborative network, Co-innovation, Value proposition

1. INTRODUCTION
The implementation of the ASEAN free market, known as the ASEAN Economic Community (AEC) has opened up an opportunity for Small Medium Industries (SMIs) to conduct international activities such as export. Export is one of internationalization methods that provides an opportunity for market expansion by generating value-added products. Verdin and Heck (2001) stated three main benefits for companies to undertake international activities, namely, cost advantage, network benefit, and learning opportunities. Conducting business in the international market is challenging. Companies have to prepare to face tough competition with other entrepreneurs in the international market. Indonesia recently encountered an SMI-related important issue on “whether (Indonesia) can be a significant player in the international/global market and does not only deal with the domestic/local market” (Tambunan, 2007).

Delivering value proposition is one of the key success factors in generating added value, so that the products and services offered can compete with their counterparts. Entrepreneurs are expected to increase their abilities in managing their products to provide added value. Numerous entrepreneurs competing in the international market face the failure of the products they offer to meet customer expectations because they are considered less attractive in terms of innovation. The lack of innovation may be
attributed to the limited collaboration with various parties. Collaborative network is the main issue that allows knowledge and skill to be shared by utilizing network resources. This condition results in the difficulty in conducting several activities, including accessing knowledge and resources, as well as entering the international market (Cerrato & Piva, 2008).

In fact, building a network is not easy for entrepreneurs. The study by Abdulah and Zain (2011) indicated that SMIs do not conduct international business because of the difficulty in using the network. Aside from the intercepting difficulties, the implementation of practices in building network is still speculated to rely on social network (Johanson & Vahlne, 2003). As such, they have not been able to build an optimal network that can be used as a capital or strength (network capital) by calculating “economic, rationality, and logic” as investment aspects (Huggins, 2009). For SMIs, a collaborative network may be an uncommon business practice in utilizing network resources, particularly those outside the company. In the globalization era, network resources utilization practices need to stress on collaboration (Bititci et al., 2004; Matos & Afsarmaneh, 2005; Huggins, 2010). The important aspects related to network resource utilization are relationship, engagement, community, and sharing, which serve as solutions for SMIs to overcome various problems in engaging in international activities.

Fostering collaboration with all parties related to network resources may be a suitable strategy to encourage innovation acceleration for the free market competition. Small Medium Industries can develop co-innovation activities with partners in the open innovation-base network. Open innovation is a quick step to rapidly accomplish innovation with reduced costs by utilizing the support of all parties in the network. The innovation created by companies has experienced a breakthrough from closed to open innovation. Chesbrough (2003) described that in closed innovation, companies develop their own ideas, innovation, fabrication, marketing, and distribution, whereas open innovation involves knowledge and expertise outside companies that can offer added value for the company. Afterwards, Marques (2014) confirmed that employing open sources is challenging because the essence of open innovation is to share information, and open relationship with sensitive knowledge can cause difficulties for commercialization and technology. In addition, Arigo (2013) stated that open innovation expressly use the inflows and outflows of knowledge among numerous partners to accelerate innovation. In conclusion, open innovation underlines the importance of utilizing knowledge from an external environment and modifying them into innovative processes, products, and services.

This study aims to investigate how far a collaborative network can boost the acceleration of innovation and affect the creation of value proposition that will eventually increase the internationalization intensity. The focus of this study is the creative industries in Indonesia frequently involved in international business.

2. LITERATURE REVIEW

Importance of Collaborative Network to Encourage Co-innovation by Utilizing Open Sources
The growing phenomenon of network resource utilization can be a mainstay for companies that use open source (inflow and outflow of skill and knowledge) to accelerate innovation (Arigo, 2013). Furthermore, Camlek (2012) showed that co-innovation strategy is a breakthrough in combining open sources (external sourcing) and internal innovation processes (see Figure 1). Both external and internal innovation can be facilitated through the formation of a collaborative network by solidifying collaboration, relationship, sharing skill/knowledge, and community engagement aspects. The concept of co-innovation developed when the concept of co-creation was frequently used in numerous empirical studies. Co-creation is generally defined as the participation of consumers with producers in the creation of a value marketplace (Zwass, 2010; Piller et al., 2011). However, companies should face the difficulty of utilizing network resources in the future. Hossain (2013) declared that open innovation is so far and away forward. Coras and Tantau (2014) reported that apart from its benefits, open innovation implicates several risks for companies, namely, industry regulation, unequal skills between partners, inability to adapt to technology, employee resistance, and intellectual property.

The innovation created by companies has experienced a breakthrough from closed innovation into co-innovation or open innovation (Chesbrough, 2003; Melese, 2009; Arigo, 2013, Ismulyati & Ginting, 2018). Open innovation fundamentally emphasizes the importance of utilizing knowledge from the external environment and turning it into innovative products and service processes (Odenthal et al., 2004). Similarly, Ebert (2007) confirmed that open sources drive innovation. Current empirical studies from several experts (Baldwin & Hippel, 2010; Reed & Barness, 2012; Dvorak, 2013; Martinez et al., 2014; Meilani & Ginting, 2018) have pointed out that innovation encourages the creation of a competitive advantage; this advantage can generate profit by investing in innovative design to maintain the performance for survival.

![Co-Innovation Strategy](image)

*Figure 1. Co-innovation Strategy*  
(Source: Camlek, 2012, p.121)

Establishing collaborations and relationships with various parties, such as suppliers, agents, buyers, governments, and universities, as intermediaries is important to accelerate innovation in order to utilize network resources optimally (Piller, 2006). A collaborative network is composed of various entities (organization and people) that are largely autonomous, geographically distributed, and heterogeneous in terms of their operating cultural and social environment (Matos & Afsarmanesh, 2005). A
collaborative network represents a promising paradigm in the knowledge-driven society; also, participating in a collaborative network can potentially benefit the entities involved especially in terms of the following: 1) accessing new knowledge or a wider market; 2) sharing risk and resources; 3) combining complementary skills and capacities that allow each entity to focus on its competencies; 4) obtaining resources to compete for limited resources; 5) recognizing and improving the competitiveness of individual organization (Bititci et al., 2005; Matos & Afsarmanesh, 2006). Furthermore, the new concept of collaborative network (Xiaomi et al., 2014; Mirce, 2015) emphasizes the tremendous potential of a collaborative network to develop various collaborative and innovative capacity building and to generate inter-organization tacit knowledge. Thus, the acceleration of innovation is driven by the development of individual and collective sharing and contribution. This paradigm shift requires further exploration on how personal freedom and social welfare can be intensified (Hossain, 2013). The concept of collaboration is an important locus of innovation through the use of community as a resource network (Piller et al., 2011).

**Delivering Value Proposition as an Important Determinant in Increasing International Intensity**

As a new marketing paradigm, Service Dominant Logic (SD-L) proposes the shifting paradigm from value added to value proposition. Value proposition is a basic premise of S-DL (Vargo & Lusch, 2004). Entrepreneurs should change their point of view in which creation and added value are accomplished through manufacturing process to the perspective wherein companies can only offer value proposition realized in the co-creation value process with customers (Lusch & Vargo, 2006; Gronroos & Voima, 2010). Marketing evolution has shifted from **to market**, which focuses on the importance of managing customers and markets, and then shifts to **market with**, wherein the essence is collaboration with customers and partners to create and maintain value (Lusch et al., 2007; Ramaswamy, 2010). S-DL views marketing as a series of continuous social and economic processes focusing on operant resources (knowledge and skill) as the main components to generate a better value proposition than competitors. Marketing focuses on facilitating and supporting the value creation process, not merely the ready-made value distribution to customers. Therefore, companies can only offer value proposition because customers decide on the value and participate in its creation through the co-creation value process.

The essence of the S-DL premise (Vargo & Lusch, 2004) is that companies can only offer value proposition. Customers are the most important element for a company; therefore, value creation can only be possible if products and services are consumed by customers. The value for customers is created by interacting with the company, thus, the focus is on the value creation process, wherein value is created for the customer and perceived by the customer. Jaka et al., (2011) described value proposition as the utility that the customer receives compared to the cost of receiving the goods and services that deliver utility. Value proposition consists of capability and impact (benefit perceived by customers), as well as cost (trade off). Capability refers to what the company does to the customer, whereas impact is how the company provides solution and cost related to the sacrifice necessary to fulfill customer needs, wants, and expectations.

Several experts have proposed value proposition definitions through its development. Among these, Flint and Mentzer (2006) described value proposition as the
particular products and services that can potentially be valued if the customer finds a way to utilize them toward achieving a goal; that is, the products and services are proposed to help customers create value for themselves. Muller (2012) indicated that value proposition describes how value is created for customers and clarifies the kind of value delivered through product and services. Afterwards, Kowalkowski (2011) expressed that implementing the dynamics of value proposition experiences in its implementation is one of the principals posing the managerial implication that value propositions that emphasize value-in-use tend to address the needs of multiple evaluators (users and buyer) more than those that emphasize value-in-exchange. Customers deliver the final choice in the decision-making process; therefore, the value proposition should be analyzed from the customer standpoint. From these definitions, we can conclude that the fulfillment of customer needs and wants should concern the customer. Consequently, the involvement of customer in value creation becomes extremely important.

From the explanation above, value proposition is regarded as the pledge of the company for the customer. Customers make the final decision in the decision-making process. Value proposition reflects the image, symbol, and myth of the products and services purchased by the customer; furthermore, it can be viewed as a tool for entrepreneurs to assist customers in creating value. Entrepreneurs are required to be skillful in communicating value to customers for the value proposition offered to meet their expectations. As confirmed by Kowalkowski (2011), the ability to communicate a firm’s value proposition strategically and effectively is a new area in the development of competence at the core of competitive advantage. Company performance can no longer be emphasized on financial aspect (profit maximization), but more on market feedback to fulfill value proposition (Hoolbrok, 2006). A similar interpretation is suggested by Muller (2012), wherein value moves from economic (what’s the price) Functional (does it work) Emotional (do I like it) Status (does it reflect my ambition) Meaning (is it essential) levels. In conclusion, companies should define the creation of value and the delivery of meaningful consumption.

Thus, value proposition is the value offered by companies for the products offered to provide a better benefit than competing products. In relation to products in the creative industries, the creation of value proposition includes quality, uniqueness, and design. Creative industries who offer value proposition to customers are considered to possess a competitive advantage. The ASEAN open market can provide a wide opportunity particularly for industries in Indonesia to expand their market share. According to several experts (Sullivan, 1994 a, b & 1996; Stewart, 1997; Thoumrongroje & Tansuhaj, 2005), participating in international business is defined as the use of the internationalization intensity concept in referring to the intention of a company to be more involved in international activities. Therefore, the main objective of this study is to assess the collaborative network and its impact through related variables and dimensions as expected and experienced by entrepreneurs. The conceptual model of the study is illustrated in Figure 2. The variables related to the correlated dimensions/attributes are shown in Table 1.
Figure 2. The Proposed Model
(Source: Author)

Table 1
Variables and Dimensions

<table>
<thead>
<tr>
<th>No</th>
<th>Variables</th>
<th>Dimensions/Attributes</th>
<th>Notes for the Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Internal Innovation Process/(X_1)</td>
<td>(X_{11}) Empowerment (X_{12}) Resources Utilization</td>
<td>Each independent variable ((X)) has two dimensions.</td>
</tr>
<tr>
<td>2</td>
<td>External Innovation Sourcing Network/ (X_2)</td>
<td>(X_{21}) Collaboration (X_{22}) Relationship</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Co-innovation/ (Y_1)</td>
<td>(Y_{11}) Product Design (Y_{12}) Technology</td>
<td>(Y_1) and (Y_2) are mediating the variable with two and three dimensions.</td>
</tr>
<tr>
<td>4</td>
<td>Value Proposition/ (Y_2)</td>
<td>(Y_{21}) Unique (Y_{22}) Quality (Y_{23}) Benefit</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>International Intensity (Degree of (Y_3))</td>
<td>(Y_{31}) Foreign Profit to Total Profit (FPTP) (Y_{32}) Foreign Sales to Total Sales (FSTS)</td>
<td>International Intensity ((Y_3)) is the dependent variable with two dimensions Total questions: 31</td>
</tr>
</tbody>
</table>

(Source: Author)

3. RESEARCH METHODOLOGY

This study used the verification-explanatory research method (Cooper & Schindler, 2011). The hypothesis of this study was tested using the SEM-PLS (Partial Least Square) method. This study surveyed a sample of the population, namely entrepreneurs in creative industries (SMIs). The unit analysis of this study was creative industries in Indonesia who conducting international business (export orientation) from three provinces in Indonesia: West Java, Jakarta, and Banten. The unit of observation is the company owners, directors, vice directors, and managers. Based on the data (three
provinces) from Directorate SMIs (2014), the target population of 100 companies from the creative industry engaged in export was identified. The number of the unit sample determined the use of Yamane Theory (Sanusi, 2011).

Formula: $n = \frac{N}{1 + Nd^2}$

$n = \frac{100}{1 + 100(0.05)^2} = 80$

The population target included 80 creative industries. The samples were obtained using the random sampling technique. The creative industries chosen in this research are agrobusiness, garment and fashion, handicraft, and furniture. Four of the industries were selected as the entrepreneurs in these industries mostly engage in international business (export). The number of the minimal sample taken was based on the table guidance of PLS recommended by Hair et al., (2014). The minimal sample was determined based on the number of arrows pointing at the construct in the research model. Using a significance of 5%, the number of minimal sample derived was 65.

SEM-PLS was used to identify the plausible relation among the variables involved. The operational variables is then illustrated in Figure 3.

![Figure 3. Operational Variables (Sources: Author)](image)

The following hypotheses were developed ($H_1$–$H_3$) based on the previous studies by Sullivan (1994 a,b), Flint and Mentzer (2006), Lusch et al., (2007), Kowalkowski, (2011), Piller et al., (2011), Arigo (2012), and Camlek (2012). The hypotheses outlined in this study are as follows:

**Hypothesis 1:**
1.a. The internal innovations process influences co-innovation.
1.b. The external innovations source influences co-innovation.

**Hypothesis 2:** The co-innovation through collaborative network influences value proposition.

**Hypothesis 3:** The value proposition influences international intensity.
4. RESULTS AND DISCUSSIONS

A total of 65 SMIs from the 80 target population participated in this study. The respondents of this study came from 4 creative industries: agrobusiness (10 companies), garment and fashion (20 companies), handicraft (25 companies), and furniture (10 companies). The descriptive analysis results on the respondent characteristics are described in the following table (see Table 2).

Table 2. Respondent characteristics

<table>
<thead>
<tr>
<th>Category</th>
<th>Total</th>
<th>%</th>
<th>Category</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Sales (IDR)</strong></td>
<td></td>
<td></td>
<td>Experience in industry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>200−2.5 million</td>
<td>35</td>
<td>53.8</td>
<td>1−5</td>
<td>13</td>
<td>20</td>
</tr>
<tr>
<td>2.6−12.5 million</td>
<td>25</td>
<td>38.5</td>
<td>6−10</td>
<td>29</td>
<td>44.6</td>
</tr>
<tr>
<td>12.6−25.5 million</td>
<td>5</td>
<td>7.7</td>
<td>11−15</td>
<td>15</td>
<td>23.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>65</td>
<td>100</td>
<td><strong>Experience in international market</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5−20</td>
<td>5</td>
<td>7.7</td>
<td><strong>Unimportant</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21−40</td>
<td>35</td>
<td>53.8</td>
<td>1−3</td>
<td>14</td>
<td>21.5</td>
</tr>
<tr>
<td>41−60</td>
<td>15</td>
<td>23.1</td>
<td>4−6</td>
<td>33</td>
<td>50.8</td>
</tr>
<tr>
<td>61−80</td>
<td>6</td>
<td>9.2</td>
<td>7−10</td>
<td>15</td>
<td>23.1</td>
</tr>
<tr>
<td>81−99</td>
<td>4</td>
<td>6.2</td>
<td>&gt;10</td>
<td>3</td>
<td>4.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>65</td>
<td>100</td>
<td><strong>Interest level in conducting international business</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect export</td>
<td>52</td>
<td>80</td>
<td>Unimportant</td>
<td>3</td>
<td>4.6</td>
</tr>
<tr>
<td>Direct export</td>
<td>13</td>
<td>20</td>
<td>Less important</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>65</td>
<td>100</td>
<td><strong>Important</strong></td>
<td>36</td>
<td>55.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Very important</strong></td>
<td>9</td>
<td>13.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Total</strong></td>
<td>65</td>
<td>100</td>
</tr>
</tbody>
</table>

(Source: Author)

Experience dictates that the preparation for business expansion in both domestic and international markets is vital. Internationalization is a "closed loop," such that previous experiences guarantee the next step. Companies that operate for a maximum of 5 years accounted for 20%. These findings revealed that some companies conducted international business rapidly. The interview results disclosed that some SMI
entrepreneurs quickly worked in the international market and prioritized the export markets rather than the domestic markets considering the large market potential. Most companies (80%) indirectly exported because of problems in dealing with export procedure and promotion, as well as in identifying potential buyers abroad and getting limited information on international market. Results showed that 20% of the creative industries in this study, most of which were medium enterprises, conducted direct export. The SMIs that started to conduct international activities exported to countries with psychological and socio-cultural proximity (neighborhood countries). This condition was observed mostly in the agribusiness (food and beverages) and fashion industries with Malaysia and Singapore as export targets. European buyers have already acknowledged the advantage of Indonesian products. The interview revealed that the products of Indonesian SMIs still received positive responses from buyers because of the design and quality advantages when compared with their Chinese and Vietnamese counterparts that are cheaper with low quality. Majority of the creative industries (92%) tended to consider international business as important because of its huge potential; furthermore, the possibility to profit here is higher than if they only conduct business in the domestic market.

After considering the profile of the respondents, we are now in position to show the hypothesis results and the loading factors analysis with the explanation (see Figure 4).

The first upshot figure clearly shows that all hypotheses examined were validated and positively substantiated by the analyses. These co-innovation was influenced by internal innovation (H_{1a}) and external innovation (H_{1b}). Co-innovation affected value proposition (H_{2}). Moreover, international intensity was influenced by value proposition (H_{3}).

![Figure 4. Results of Hypothesis and Loading Factors (Source: Author)](http://example.com/image.png)
The second effect was related to the resulting loading factors of the model. Evidently, the statistically strongest influential factors include value proposition toward degree internationalization (0.75), and co-innovation strongly influenced value proposition (0.72). Furthermore, co-innovation was mostly influenced by external innovation (0.56), followed by internal innovation (0.25).

Referring to the dimensions in internationalization intensity, a respondent strongly believed that being involved in the international market will bring positive results in profit and sales. This is valid on the condition that companies are delivering value proposition, which is strongly supported by co-innovation which exceeds customer expectation in terms of uniqueness, quality, and benefit. In terms of co-innovation, it can be stated that SMIs think that partners are helpful in developing design, increasing product quality, and developing production capability as important parts in generating innovative products. This study can prove that co-innovation was mostly influenced by external innovation utilizing network (collaboration and relationship). Generally, it can be stated that open innovation by using internal innovation process (human resource empowerment and resource utilization) can be combined with resource utilization owned by network partners based on the strong collaboration and relationship that can influence the creation of co-innovation.

To sum up, this result indicated that utilizing open sources can be implemented as a strategy to enter the international market. To utilize open source optimally, entrepreneurs can establish a wide network with several parties, such as the government (ministries), associations, private companies, and banks, as well as other financial institutions, so that creative industries can gain several benefits, namely: 1) becoming partners of the Indonesian State Owned Enterprise in helping facilitate a strong international business network for entrepreneurs; 2) obtaining opportunities to access capitals through non-banking institutions to finance exports so that they have more options other than banks; 3) receiving opportunities to participate in various trainings to increase business capacity that includes innovation, international standard quality, technology, development of product design, and employee skill upgrades; 4) obtaining opportunities to participate in both local and international exhibitions and receiving information on international markets including buyer profiles, international market potential, and international market trends.

For the government, this study can provide insights in generating policy and holding various trainings required for the development of entrepreneurs in facing AEC. In addition, the requirements observed in the study are as follows: 1) establishing agencies that help entrepreneurs expand their network (collaborative network) to access network resources from other parties such as buyer, distributor, trade association, banks, and financial institutions. Agencies can function as mediators to introduce SMIs to overseas business associations, so that they can obtain information on buyers in potential markets to establish business cooperation and trade exhibitions. To function optimally, these agencies should come from the private sector, such as entrepreneurs from medium/large companies who have succeeded in conducting export or associations. 2) the capabilities and competencies of SMIs should be strengthened to develop effective networking by organizing trainings of business networking skills, particularly in strategic networking, building relationships, and using online social networking. 3) together with the local government, relationships with financial institutions and banks are necessary to guarantee that export-oriented SMIs can obtain
credit assistance in export capital with credit limits greater than KUR/People’s Business Credit (5 billions-IDR) given that export financing requires substantial funding.

5. CONCLUSION

Evidence depicts co-innovation as a breakthrough to accelerate innovation, this has been successfully accomplished by SMIs and has created value proposition. The competitive advantage in the form of value proposition creation was also confirmed to increase internationalization intensity. Compared with the internal innovation process, external innovation sourcing network, which involves partners (distributors, suppliers, agents, government, and university), was proven to pose a stronger effect on co-innovation. This finding indicates that building collaboration and relationship through collaborative network can encourage innovation acceleration. The results also show that co-innovation strongly affects the creation of value proposition and internationalization intensity. This means that the intensity of SMIs in conducting international activities was greatly affected by the creation of value proposition aimed to fulfill their promise to customers.

Therefore, to yield optimum results, this study needs to be developed in a larger area of unit analysis (creative industries) by considering the following: 1) Small and medium industries should be clearly classified because the findings showed great differences in terms of business strategies and management skills. Therefore, future studies should target respondents from small and medium industries to separately analyze them and to obtain the correct profile. 2) Small Medium Industries should be differentiated based on internationalization process, namely between SMIs that have started to do international activities and the ones that have experienced international activities (regular export activities). This differentiation is important because of the difference in the business strategy applied. Based on the findings, SMIs in the initial phase of internationalization required more support in terms of production capacity, quality, and product design. For SMIs who have experienced international business activities, their constraints were more related with networking and government support in facilitating procedure and export license. In the future, SMIs on the right track of utilizing open sources through a collaborative network as the locus of innovation can strengthen their competitive advantage to enter the international market (Xiaomi et al., 2014; Mircea, 2016).

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