

INTERACTION OF ACTORS AND FACTORS IN ENTREPRENEURIAL ECOSYSTEM: INDONESIAN CREATIVES INDUSTRIES

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ABSTRACT

Works using the perspective of comprehensive network system to study the interaction of components within the network of entrepreneurial ecosystem are still limited. These studies must maximize the performance of the entrepreneurial ecosystem. The present work attempted to appropriately analyze the interaction within the entrepreneurial ecosystem relative to the knowledge transfer that occurs through various networks within the same ecosystem. This study was conducted in East Priangan region, Indonesia, considering its competitive advantage. It used a mixed method with exploratory sequential mixed strategy through a network theory perspective. Results indicate that market and community actors have dominant involvement in knowledge transfer processes related to the progress of creative industries. In knowledge transfer processes, another main leverage factor to support innovation in creative industries includes market actors, who are the main impetuses for business actors to productively (productive entrepreneurship) innovate products assisted by community actors (surrounding communities) through the demand for their products (market conditions). On the contrary, government, banking, and professional actors have very limited involvement and interaction with business actors in the knowledge transfer process in the creative industry's entrepreneurial ecosystem in East Priangan region.

Keywords: Entrepreneurial Ecosystem, Network Theory, Entrepreneurship, Creative Industry.

INTRODUCTION

Entrepreneurship can strongly influence the dynamics of sustainable economic growth and prosperity (Auerswald, 2015). Isenberg (2011) explained that fostering entrepreneurship is a core component of economic development in cities and countries worldwide. Entrepreneurship results from the interaction between individual attributes and the surrounding environment (Stam & Bosma, 2015; Acs et al., 2017; Purbasari et al., 2018). Entrepreneurship is embedded in social relationships (Nijkamp, 2003; Stuart & Sorenson, 2005; Borissenko & Boschma, 2016). The

capital acquired by an entrepreneur from social relations can be collective learning capacity enhanced by local networks, especially informal social relations (Doloreux & Parto, 2005; Borissenko & Boschma, 2016; Purbasari et al., 2018). The main metaphor for fostering entrepreneurship as a strategy for economic development is through the entrepreneurial ecosystem (Isenberg, 2011). The entrepreneurial ecosystem approach can be used to support such efforts because the environment consists of various actor networks, and the collaborative roles played by these actors can bolster competitive advantage on the global or local scale (Isenberg, 2011; Purbasari et al., 2018).

The concept of entrepreneurial ecosystems is worthy of attention in building economic growth given that this concept illustrates an ecosystem with an independently regulating and self-trusting network system that can be useful for developing policies that support competition (Isenberg, 2010). The entrepreneurial ecosystem is a set of actors and factors that are interrelated and intercoordinated formally and informally to unite with one another. Entrepreneurial ecosystem mediates and regulates entrepreneurial performance within the local entrepreneurial environment to assist entrepreneurial success through all stages of creation of new and development of existing businesses to generate productive entrepreneurship to improve local competitive advantage (Isenberg, 2011; Clarysse et al., 2014; Mason & Brown, 2014; Stam, 2015; Purbasari et al., 2018). Good entrepreneurial ecosystem enables the creation of entrepreneurial quality and competitive values at the regional level (Fritsch, 2013; Tsvetkova, 2015). Similarly, a study conducted by Spigel (2015) in Waterloo and Calgary, Canada showed that despite having different structures and origins, the success of ecosystems lies in their entrepreneurial ability to create cohesive social and economic systems supporting the creation and growth of new businesses (Stam & Spigel, 2016).

The entrepreneurial ecosystem is an adequate framework for studying interdependence and the relationships between various actors interacting in a complex economic system (Cohen, 2006; Nambisan dan Baron, 2012; Morris et al., 2015; Neumeyer & Santo, 2017), requiring conducive policies, markets, finance, human resources, culture, and other supporting factors (Isenberg, 2011). The concept of the entrepreneurial ecosystem is holistic and interactive, and the business performance depends not only on the company's internal behavior (e.g., workforce skills, investment levels in innovation strategies, and marketing) but also on the quantity and quality of interactions with external stakeholders using a set of interaction patterns. In addition, the entrepreneurial ecosystem is a dynamic economic model that can be used for strategic planning processes. It provides a framework for reciprocal relations between actors involved and defines customer needs to ensure an increase in the value proposition in the future (Inga Erina et al., 2017). The analysis on the interests of the actors involved in the entrepreneurial ecosystem can be used to produce knowledge about relevant actors to understand their behavior, intentions, relationships, agendas, interests and influences, or resources (Brugha & Varvasovszky, 2000; Markman et al., 2005) as well as satisfy the requirement to manage interactions and interdependencies among stakeholders (Uzunca et al., 2016).

Many entrepreneurial ecosystem researchers criticize the lack of a holistic approach that focuses on interrelated aspects of entrepreneurship (Hoang & Antoncic, 2003; Thornton &

Flynn, 2003; Borissenko & Boschma, 2016; Purbasari et al., 2019), and the study of systemic roles in entrepreneurial activity is still undeveloped (Qian et al., 2013; Acs et al., 2014, Borissenko & Boschma, 2016; Purbasari et al., 2019). The entrepreneurial ecosystem model created by certain experts still does not have a causal path, does not describe the interaction relationship between elements in the ecosystem, does not have a clear analysis level of the entrepreneurial ecosystem approach, or can only be applied to developed countries (Isenberg, 2011; Mason dan Brown, 2014; Stam, 2015; Jennen Tina et al., 2016). Alvedalen & Boschma (2017) stated that as a systemic concept, the entrepreneurial ecosystem is still unclear in the ways the elements (actors and factors) are connected within the entrepreneurial ecosystem. In addition, several entrepreneurial studies consider entrepreneurial opportunities as exogenous, thus ignoring the opportunities as part of the entrepreneurial process (Qian et al., 2013; Purbasari et al., 2019). On the contrary, in the systemic view of entrepreneurship, entrepreneurs act on new opportunities and mobilize resources from their environment to exploit these opportunities (Acs et al., 2014; Borissenko & Boschma, 2016; Purbasari et al., 2019). Therefore, studies on the interaction patterns of components within the network of an entrepreneurial ecosystem from the perspective of a comprehensive network system are still limited; additional works should be conducted to maximize the performance of the entrepreneurial ecosystem (Purbasari et al., 2019).

The present study attempted to analyze the interaction within the entrepreneurial ecosystem relative to the transfer of knowledge through various networks, thereby improving the quality of entrepreneurship to produce innovations that create competitive advantage using a network theory perspective. Several arguments support the examination of the entrepreneurial ecosystem through the network theory perspective. The entrepreneurial ecosystem is considered a complex system, which has a network defined as the interaction between components, namely, actors and factors (Isenberg, 2011). In line with this opinion, Letaifa (2016) considered that ecosystems are an extension of network theory. A network theory approach and strategic thinking are considered suitable for exploring the relationships and interdependencies of ecosystem actors for value creation (Zahra & Nambisan, 2012; Kapoor & Lee, 2013). The conceptual model of the entrepreneurial ecosystem used a reference to explain the patterns of inter-actor, and inter-factor interactions used an entrepreneurial ecosystem model developed by Purbasari et al. (2018).

LITERATURE REVIEW

Entrepreneurial Ecosystem

Entrepreneurial ecosystem is a relatively new phenomenon conceptually and theoretically. It is rooted in economic geography (Audretsch dan Feldman, 1996; Malecki, 1997), cluster theory (Bathelt et al., 2004; Casper, 2007; Bell et al., 2009), competency blocks (Eliasson, 2001; Johansson, 2010), and entrepreneurial communities (Johnstone dan Lionais, 2004; Feld, 2012). Entrepreneurial ecosystems are generally defined as areas for supportive

cultures, policies and leadership, human capital, abundant finance, and various institutional and infrastructure support to grow new businesses (Isenberg, 2010; Brush Corbett & Strimaitis, 2015; Stam, 2015; Spigel, 2017). The distinctive feature of each entrepreneurial ecosystem is the symbiotic relationship between different stakeholders, and it is not only used for trade but also as a solution to economic and social problems (Xavier et al., 2013; Neumeyer & Corbett, 2017).

The entrepreneurial ecosystem approach emphasizes the interdependencies of actors and factors, but it views entrepreneurship (new value creation) as an entrepreneurial ecosystem output. The output or outcome can be in the form of the concept of productive entrepreneurship (Baumol, 1990), leading to the definition of entrepreneurial ecosystems as a set of interdependent actors and factors coordinated to enable the creation of productive entrepreneurship in certain areas (Stam & Spigel, 2016). Isenberg (2010) suggested that the renewal of the entrepreneurial ecosystem approach lies in its focus on entrepreneurship (productive) as the ecosystem output. Within an entrepreneurial ecosystem, a central role is oriented toward successful entrepreneurship with long-term commitment to the region (Feld, 2012). This entrepreneurship refers to self-organizing in the entrepreneurial ecosystem, not only as an output but also as an input to the system (Mason & Brown, 2014; Stam, 2015; Acs et al., 2017).

Stam & Spigel (2016) defined entrepreneurial ecosystem as a set of interdependent actors and factors coordinated to enable productive entrepreneurship within a particular territory. Mason and Brown (2014) defined entrepreneurial ecosystem as a set of interconnected entrepreneurial actors (potential and existing), entrepreneurial organizations, institutions, and entrepreneurial processes, which formally and informally coalesce to connect, mediate, and govern the performance within the local entrepreneurial environment. The entrepreneurial ecosystem approach not only focuses on individuals as business actors but also on the relational aspects between different institutional actors and how these aspects facilitate innovation processes. Most of the results of entrepreneurial ecosystem studies are consistent with the systemic literature on innovation systems (Borissenko & Boschma, 2016), especially the emphasis on the relational elements between multiactor networks within the region that governs entrepreneurship and knowledge creation (Brown & Mason, 2017). In addition, the role of (social) contexts in limiting entrepreneurship, closely related to the “entrepreneurial system” approach (Ylinenpa, 2009; Acs et al., 2014; Levie et al., 2014), evidently bridges the innovation system approach and entrepreneurial studies (Erik Stam, 2015). Innovation systems are used to understand systemic processes underlying the development and transfer of knowledge (Freeman, 1995; Lundvall, 2010; Brown & Mason, 2017).

Figure 1 (Source: Purbasari et al., 2018) illustrates the interaction between all elements existing in the entrepreneurial ecosystem. On the basis of a network theory perspective, this entrepreneurial ecosystem model can show approaches, in which each entrepreneurial ecosystem component interacts through a framework that can show the network size or density, cohesion, heterogeneity, interaction frequency, and the centrality of all actors in the entrepreneurial ecosystem. Analysis can be carried out on the relationships and functions of each actor or factor by using these measures through network density, interaction frequency, the strengths or

weaknesses of the actors/ factors or their relationships, the most dominant actors/ factors, connecting actors/ factors, and specific diversity owned by the actors/ factors in the entrepreneurial ecosystem. In the process of transferring knowledge, the analysis results of these indicators assist in designing policies and strategies related to the formulation of training programs, business training, financial plans, marketing schemes, and other aspects. The policies and strategies can be directed toward increasing productive entrepreneurship to produce innovative, creative, and value-added new products or services that will positively influence regional competitive advantage. Discrete domain specialties can be associated through these networks and connections, depending on the interaction of social capital and knowledge transfer between major stakeholders (Hayter, 2013; Flores et al., 2017).

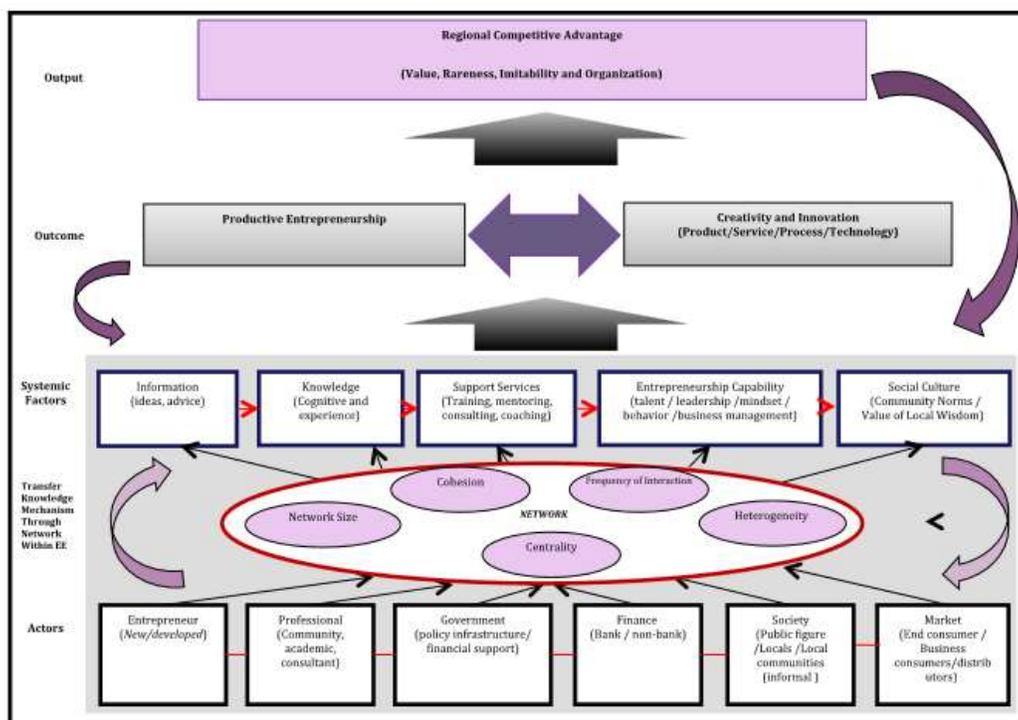


FIGURE 1
CONCEPTUAL MODEL OF THE ENTREPRENEURIAL ECOSYSTEM

Network Theory

Over the previous decade, several important research advances arise toward understanding complexity in the context of network theory, which explained that each complex system has a network further defined as the interaction between components (Evans et al., 2015). Network theory refers to the mechanisms and processes of interaction within the network

structure to obtain specific results for individuals and groups (Burt, 1992; Fritsch et al., 2008; Boggati & Halgin, 2011; Neumeyer & Santos, 2017).

The network consists of a set of actors or shared nodes in a set of certain bond types (such as friendship) that connect them. The relationship is interrelated to achieve the same goal to form a path that indirectly connects actors who are disconnected or directly bound. The bond pattern in the network produces a certain structure, and the actor occupies a position within this structure. The majority of network theory analyses consider the characteristics of the network structure and the position of the actor (centrality), attempting to relate them to the achievements/outputs generated by groups and actors (Boggati & Halgin, 2011).

The use of a network theory perspective in the entrepreneurial ecosystem is considered relevant because the entrepreneurial ecosystem has connecting assets or connectors that connect people, ideas, and resources (Napier & Hansen, 2011). Connectors are defined as well-connected and experienced people with skills, knowledge, and connections with others as well as resources to support new companies. Connectors can help new companies realize their growth potentials by sharing expertise, information, and resources and providing connections to suitable individuals and organizations (such as customers, service providers, and talents). Connectors can be entrepreneurs, investors, or public (government) service providers (Mason dan Brown, 2014). In the network theory perspective, the aspect referred is the relational structure between various stakeholders in the entrepreneurial ecosystem and the level of connectivity between actors influencing social network connectivity (Neumeyer & Santo, 2017).

Creative Industry

The concept of the creative industry has been an interesting study for academics and policy literature for more than a decade. Hesmondhalg & Pratt (2005) suggested that the emergence of creative industries began with the commercialization of cultural production in the 19th century, and from the beginning of the 20th century onwards. Then, it expands industrial society in advanced (Maryunani et al., 2015; Černevičiūtė & Strazdas, 2018; Alex et al., 2019). One of the first literatures on the creative industry was Adorno & Horkheimer (1979), who developed the idea of cultural industry intended to draw attention to art commodities.

The term creative industry began to be used by researchers to describe the sectors of the British economy, where knowledge and creativity add economic and social values to goods and services (British Government Department for Culture, Media and Sport, 1998, 2008; Parkman et al., 2012). Creative industries are generally related to innovation (such as films, televisions, and music recording), which is mostly played by small and medium enterprises (Wilson and Stokes, 2005). The characteristics of creative industries include the centrality of innovation activities in organizational, product, and service markets, where consumer demands are highly subjective, changing and often have ambiguous boundaries between attributes, and focus on identifying opportunities to create values (economic and social). Howkins (2001) argued that the term creative industry indicates that brainpower is higher when the result is intellectual property. Therefore, creative industry activities depend on creativity, skills, and individual talents, and the

main product is intellectual property instead of material goods or services (Müller, Rammer, and Trüby, 2009).

METHODS

This study used a mixed method with an exploratory sequential mixed strategy (Creswell, 2010). The exploration design was carried out in two stages, initially marked by a qualitative data collection and analysis phase, and then continued with a quantitative data collection and analysis phase.

Systemic actors and factor components were manifested in several variables in the entrepreneurial ecosystem. This entrepreneurial ecosystem model has six actors, and the conceptual framework of the entrepreneurial ecosystem model has five systemic factors ((Figure 2) (Source: Isenberg, 2011, Mason & Brown, 2014; Stam, 2015; Burt, 1992; Hanneman, Robert & Mark Riddle, 2005; Fritsch et al., 2008; Neumeyer & Santos, 2017; Purbasari et al, 2018)). The analysis of interaction patterns between actors in the entrepreneurial ecosystem illustrates how each actor interacts with each other in the context of knowledge transfer, referring to the dimensions of the Network Theory perspective based on Burt (1992), Hanneman et al. (2005), Fritsch et al. (2008); Neumeyer & Santos (2017). These dimensions consist of knowledge transfer, knowledge absorption, cohesion, centrality, heterogeneity, frequency of interaction, and network size. In this study, we exclude the centrality dimension, which is often used to determine the central actor in network theory research (Brass & Burkhardt, 1993; Rowley, 1997; Setatama & Tricahyono, 2017). While this study aims to analyze the interaction of actors and factors in the entrepreneurial ecosystem.

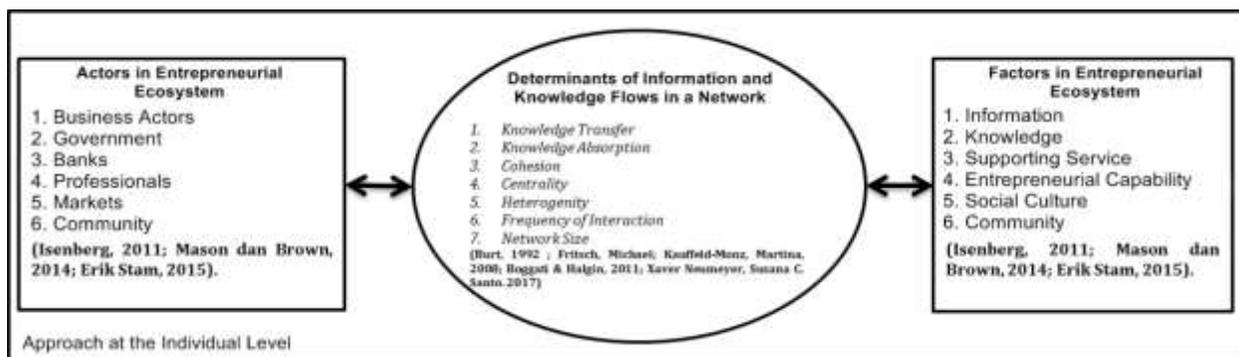


FIGURE 2
CONCEPTUAL FRAMEWORK OF THE ENTREPRENEURIAL ECOSYSTEM

The interaction pattern analysis used the microanalysis level (business actors). This approach is based on the fact that one of the entrepreneurial ecosystem characteristics is complexity marked by the number of networks of actors and factors (Relational Structure) involved (Kantise Frederico, 2012). Thus, analyzing the entrepreneurial ecosystem in general is

difficult and requires a limited level of analysis (Letaifa et al., 2016). Borissenko & Boschma (2016) added that the type of network analysis at the micro-level can be applied to the entrepreneurial ecosystem. In addition, the entrepreneurial ecosystem is different from other approaches because it places business actors as the driving force (Mason & Brown, 2014).

This study was conducted in East Priangan region covering Garut Regency, Tasikmalaya City & Ciamis Regency. The selected cities and regencies have competitive advantages that allow easy determination of the entrepreneurial ecosystem (Ratih et al., 2018). The population and informants in this study were those involved in the entrepreneurial ecosystem of handicraft-subsector creative industry in East Priangan region (the Akar Wangi handicraft industry in Garut Regency, the Mendong handicraft industry in Tasikmalaya City, and the Coconut sticks woven handicraft industry in Ciamis Regency), consisting of business actors, government, banking, professional or academic, market, and society.

Data were collected using questionnaires and deep interviews. The questionnaires combined open and close options used to collect data on the dimensions of network theory. Quantitative data were processed using SPSS 20 for tabulation and interpretation. Meanwhile, qualitative data processing and analysis were conducted interactively and continuously until completion (Miles & Huberman, 2007; Yang & Černevičiūtė, 2017); they include data reduction activities (data reduction, data display, and conclusion drawing or verification). Patterns of inter-actor and -factor interactions in the entrepreneurial ecosystem were analyzed descriptively by referring to Nazir (2005) to describe precisely a situation, individual traits, or occurring symptoms. The patterns of inter-actor and -factor interactions occurred in the creative industry entrepreneurial ecosystem in East Priangan region.

RESULTS AND DISCUSSION

Dimension of Knowledge Transfer

The dimension of knowledge transfer measures the knowledge transferred by business actors to other actors in the entrepreneurial ecosystem.

The results of the questionnaire data processing (2018) showed that most of the business actors provided knowledge to other actors (84%), whereas the remaining actors did not (15.9%). Therefore, in the creative industry entrepreneurial ecosystem in East Priangan region, knowledge transfer has taken place from the business actors to other actors. Most actors provided substantial knowledge (45.7%). Thus, business actors provided most of their knowledge to other actors, whereas the remaining actors did not. On the basis of the interview results, business actors transferred knowledge to improve entrepreneurial skills, change the mindset of the community in terms of innovation to the products produced, and enhance the creative industries. If the creative industries were previously considered extremely traditional, then the knowledge provided to the craftsmen or employees is expected to produce innovative products. Business actors acknowledged that they often encourage each other as a form of support to allow the industry to continuously survive and develop. The success of knowledge transfer processes depends on the

role of business actors as leaders in the business. Andrews (2002) revealed that the ability to transfer knowledge depends on leadership, culture, infrastructure, technology, and acceptance of the need for continuous improvement (Flores et al., 2017). In addition, these factors are integrated into the following phases from knowledge processes: production, acquisition, absorption, reproduction, and dissemination (Ladd & Ward, 2002; Flores et al., 2017). Knowledge management aims to align the process with organizational goals by focusing on sharing, acquiring, and creating knowledge and cultural and technical foundations to support these actions (Andrews, 2002; Flores et al., 2017).

Business actors revealed that knowledge transfer processes were carried out through training activities, exhibition, and sharing of knowledge and experience with other business actors, the government, employees, and the surrounding community. This approach is also a form of support for business people in the advancement of creative industries to empower the community by providing or sharing the knowledge possessed through training activities and job involvement. Thus, the surrounding community acquires the skills and expertise in producing industrial products. Knowledge transfer processes also occurred through discussion and exchange of ideas between fellow business and market actors related to the development of creative industries in the market. Knowledge transfer is important because, in public policy, the creation of an entrepreneurial ecosystem among various types of social actors is encouraged as a tool to promote local development. This process requires knowledge transfer because knowledge encourages innovation and economic growth (Flores et al., 2017).

The types of knowledge provided by the majority of creative industry business actors in East Priangan region included weaving methods (38.8%), marketing strategies (20.0%), and product designs (10.6%). In other words, the knowledge about weaving methods, marketing strategies, and product designs was the most important and required by other actors involved in the creative industries in East Priangan region based on the business actors' perceptions. The knowledge was mostly provided by creative industry entrepreneurs to fellow craftsmen (25.6%), families (24.0%), and employees (15.7%) because of their involvement in the business activities of creative industries in East Priangan region.

Dimension of Knowledge Absorption

The dimension of knowledge absorption measures the knowledge received by business actors from other actors in the entrepreneurial ecosystem. The results of questionnaire data processing showed that most business actors of the creative industries in East Priangan region received knowledge from other actors (86.2%), whereas the remaining actors did not (13.8%). Business actors receive knowledge from other actors because they realize the need for knowledge to improve entrepreneurial skills and advance their businesses. Knowledge transfer and absorption processes show the interaction process between individuals and groups (within, between, and across groups) and from groups to organizations. Thus, the recipients of knowledge will have cognitive understanding and the ability to apply knowledge to optimize the results of innovation (Liyanage et al., 2009). The creative industry business actors received knowledge

through several approaches, including finding new motives from consumers and joining training on innovation for product design development in terms of models, coloring, and diversification of training product development. In the industries, the awareness of the need for knowledge emerges because entrepreneurship and innovation are the engines of development. The combination of the two concepts can lead to unprecedented products, services, or business models as well as the creation of a completely new sector or segment (Hult et al., 2003; Hnyilicza, 2008; Araya & Peters, 2010; Diego et al., 2017). In addition, the business actors also participated in exhibitions, shared knowledge and experience with other business actors and the government, and utilized internet and books to find the latest information about developments, especially design trends. The process of absorbing this knowledge becomes a necessity for business actors because competition and selection are amid various options that enable individuals (and companies) to learn from their successes and failures and those of others. This learning process allows individuals to improve their skills and adjust their attitudes (Wennekers & Thurik, 1999) towards the state of their business environment.

The types of knowledge received and implemented by most of the creative industry business actors in East Priangan region included weaving methods (32.8%), marketing strategies (18.4%), and product designs (17.8%). In other words, the knowledge of weaving methods, marketing strategies, and product designs was the most important knowledge to possess by creative industry business actors in East Priangan region in running their businesses. These three types of knowledge were the most required and important in the creative industries in East Priangan region.

Meanwhile, the most instrumental actors in providing knowledge (knowledge sharing) to the majority of creative industry business actors in East Priangan region covered fellow craftsmen (part of business actors) (34.1%), families (part of society) (23.5%), and Disperindag or the Department of Industry and Trade (part of the government) (13.6%). The craftsmen contributed the most in providing knowledge because most business actors started their businesses by learning from other craftsmen or initially working with business actors, who also doubled as craftsmen. Meanwhile, the knowledge from families mostly came from parents or uncles from generation to generation. Business actors also revealed that the Office of Industry and Trade played a role in the creative industries by holding training covering entrepreneurship training, production training, export–import training, and marketing training, including financial management. Although business actors still considered such training programs to be ineffective because the government was considered merely implementing activity programs without focusing on the continuation of the outputs produced, thereby not significantly affecting the development of these industrial business actors. Another role of the Office of Industry and Trade is to facilitate the exhibition of creative industry products through the provision of exhibition stands for exhibition activities held in East Java and outside the city. Through the exhibition activities, the Office of Industry and Trade indirectly connects business actors with the market. These activities indicate that creative industry business actors can also gain experience of comparative studies with various handicraft industry products outside the city, thereby adding insight and relations.

However, based on the interview results, the business actors revealed that certain obstacles still exist in implementing knowledge, such as raw materials often experiencing increased prices that influence production activities, especially in developing new design models. The experiments to develop new design models certainly require raw materials. However, the limited amount of raw materials prioritized the production activities with routine design models. In addition, to realize obtained knowledge, additional production costs coupled with the increased selling price to affect sales when the production process becomes longer are required. To innovate products, the market is not necessarily ready to accept new products. The knowledge received by most business actors is not entirely applied in their businesses due to these obstacles. Therefore, business actors still require encouragement and support in applying the knowledge received for the advancement of the creative industries in East Priangan region. Efforts to apply the knowledge received by business actors are important because entrepreneurial actions are required to change knowledge investment and obtain the potential to create values (Hitt et al., 2001; Agarwal et al., 2010). The actions of business actors are a key element of the entrepreneurial process (Acs et al., 2014) because they often create innovation (Bird et al., 2012). This explanation indicates that business actors in the three industrial regions carry out entrepreneurial actions and equality in terms of the types of knowledge implemented.

DIMENSION OF COHESION

Connectivity Indicator

The connectivity indicator showed the connection of business actors with other actors in the context of transferring knowledge about the creative industries undertaken. The results of the questionnaire data processing revealed that the majority of creative industry business actors (94.7%) in East Priangan region were interconnected with other business actors in carrying out their business activities. The business actors were required to use high conceptual abilities, create new variations in the form of products and services, be skilled in organizing, collaborating, and diplomatic (the spirit of collaboration and orchestration), steadfast in facing failures, and master the technical context and the financial planning capability. The relationship between the business actors, especially in the process of transferring knowledge and information, certainly contributed to these efforts. The business actors were connected with other certain business actors mainly because these actors played a role in providing orders or assisting in marketing products to increase the turnover of business actors. Stam & Bosma (2015) stated that entrepreneurship is the result of interaction between individual attributes and the surrounding environment. Therefore, in carrying out its function, business actors require the role of other actors in their environment. In this case, the entrepreneurial ecosystem attempts to provide ideal conditions for entrepreneurship to succeed and remain sustainable. When appropriately developed, this environment stimulates the growth of new companies and is essential for creating and developing innovative companies (Autio et al., 2014). At the same time, the entrepreneurial ecosystem approach emphasizes

entrepreneurial relationships with the environment. Entrepreneurship, then, is a central element of the ecosystem (Diego et al., 2017).

The results of the questionnaire data processing showed that the majority of creative industry business actors in East Priangan region had no relationship with government actors (61.7%). The government has an important role in supporting the progress of entrepreneurship. The role of the government is to remove obstacles and provide ideal prerequisites for entrepreneurship development (Isenberg, 2011; Mason & Brown, 2014). This prerequisite is related to reformation within the legal, bureaucratic, and regulatory framework (Cohen, 2006; Isenberg, 2010). Actions to satisfy this goal include simplification and regulation of tax collection, bankruptcy decriminalization, protection of shareholders in the presence of creditors, capital market creation, liberalization and simplification of employment contract termination, and support for unemployment (Isenberg, 2010; 2011; Autio et al., 2014). On the basis of the interview results, most business actors revealed that the government is one of the parties involved in the creative industries. The government was connected with business actors through activity programs organized by the government actors for creative industry business actors. Certain business actors are even involved as instructors in activities organized by the government to teach other business actors, especially for business starters. In addition, business actors are connected with government actors through exhibitions and tourism product galleries facilitated by the government, where they can display their works. However, business actors revealed limited information regarding the implementation of government activity programs, not reaching all business actors. Thus, not all business actors could participate and take advantage of these activities.

The government actors connected with few creative industry business actors in East Priangan region include the Office of Industry and Trade (38.3%), the Office of Cooperatives, SMEs and Trade (29.8%), and the Office of Cooperatives, MSMEs, and BMT (17.0%). Therefore, these government actors play great roles in the entrepreneurial ecosystem of creative industries in East Priangan region. The Office of Industry and Trade played a role in the creative industry through entrepreneurship, production, export–import, and marketing training, including financial management. However, the business actors still considered such training programs to be ineffective because the government was merely considered to implement activity programs without focusing on the continuation of the outputs produced and does not significantly affect the development of these industrial business actors. The government was considered to spend merely existing funds to gain recognition of the implementation of such activity programs. Nevertheless, business actors recognize that the training held by the Office of Industry and Trade helps them gain innovation and motivation in entrepreneurship, although it is considered unsustainable. According to Andersson & Henrekson (2014), the Office of Industry and Trade and other offices as government actors are policymakers that can provide many benefits by working actively to improve the conditions of formal and informal institutional frameworks. A conducive local institutional environment not only enhances the opportunities created by a company but also increases readiness to exploit the potential associated with entrepreneurial activities and knowledge. The business and government actors can use ecosystems as a concept to enhance

entrepreneurship and innovation (Acs et al., 2017). To be competitive and to have strong entrepreneurial cultures, a country must have public policies forming pillars of competitiveness and entrepreneurial ecosystem (Rodriguez & Soto, 2015). Fortunately, these concepts indicate that the government actors involved in the entrepreneurial ecosystem in East Priangan region still have many shortcomings, especially in the implementation of activity programs based on the perception of business actors.

The relationship between business and banking actors is shown by the results of questionnaire data processing. The results indicate that the majority of creative industry business actors in East Priangan region had no relationship with banking actors (57.4%). The relationship between the two actors is important because this field is one of the three main aspects of the entrepreneurial ecosystem (WEF, 2015). Access to finance, in turn, is considered by entrepreneurs as one of the three main aspects of the entrepreneurial ecosystem; the other aspects include market and human resources (WEF, 2015). Financial resources, either public or private, must be available, visible, and accessible to all segments and sectors of the ecosystem (Stam, 2015). A well-developed financial market reduces the cost of capital acquisition by the company and facilitates money flow, thereby allowing companies to develop relatively fast (Kshetri, 2014). On the basis of the interview results, business actors in the creative industries revealed that banking had limited involvement and roles in which not all business actors can access business capital products provided by banks because of unsatisfied requirements.

Meanwhile, banking actors connected with few business actors consisted of BRI (80.0%), Mandiri (12.5%), and BJB (7.5%). In providing business funding support for the business actors, the role of banking is demonstrated by collaborating with the government to provide various facilities that can be utilized by MSME actors to develop businesses. The government also provides interest subsidy facilities in the People's Business Credit. The facility allows MSMEs to obtain low-interest loads, from 22%-23% to 12%. The facility is intended primarily to increase economic independence and MSME competitiveness in the international market. On the basis of the interview results, business actors revealed that BRI played a role in increasing business development through business capital assistance by channeling credit funds in the form of the People's Business Credit with low interest rates. However, most business actors still used private loans because they had not satisfied the People's Business Credit requirements, especially related to business licensing. This program should have contributed to the progress of the creative industries in East Priangan region as long as the business actors know and can easily access it. Thus, banks are necessary to intensify the socialization of this program to be utilized by creative industry business actors, who still consider the limited role of banking for their industries.

The results of the questionnaire data processing showed that the majority of creative industry business actors in East Priangan region had no relationship with professional actors (86.2%). Professional actors in the entrepreneurial ecosystem are included in the supporting service component, which is divided into infrastructure, nongovernmental organizations, and supporting professions. The infrastructure group includes telecommunication, transportation, logistics, and energy conditions (Isenberg, 2011). Nongovernmental organizations include accelerators, hubs, and incubators (Arruda et al., 2015). Meanwhile, supporting professions

include services that support business legalization, specialized business lawyers, academicians, consultants, and funding agencies (Isenberg, 2011). Universities are academicians, who have invested significant resources into the configuration of supporting mechanisms to enhance innovation and entrepreneurship (Mueller, 2007). On the basis of the interview results, the business actors revealed that professional actors had involvement in the creative industries. The professional actors, in this case, played a role in providing training and conducting research and community services. However, the business actors also recognized the limitations in the activities of professional actors, such as the limited scope (not reaching the majority of the creative industry business actors). This finding was due to the lack of program activities organized with limited funds. Thus, it could not facilitate all business actors. In addition, professional actors were generally invited as resource people or informants at training activities by the local government. They did not continuously develop relationships with other business actors.

Professional actors connected with few business actors consisted of ITB (40%), Unpad (20.0%), and IPB (20.0%). On the basis of the interview results, the business actors revealed that ITB was a professional actor, who provide counselling activities through the use of tools in the innovation process to improve product quality. Certain activities carried out by ITB included training activities on design, 3D motives, and product coloring innovation. However, the training does not significantly affect the progress of product designs because the instructors provide little innovation on the product model and does not cause model changes. ITB also conducted research in the field of biology for the raw material management to obtain relatively safe and qualified creative industry products. This condition illustrates that the role of universities is to create or transfer knowledge and provide leadership to create entrepreneurial thinking, actions, institutions, and Audretsch's entrepreneurial capital (Audretsch, 2014; Guerrero et al., 2014). University performance is a relevant factor in shaping innovation capacity and competitiveness in certain regions (Li, 2009; Bonardo et al., 2010; Lehmann et al., 2012; Huelsbeck et al., 2013; Guerrero et al., 2014).

Relative to market actors, the results of the questionnaire data processing showed that all business actors had a relationship with market actors (100.0%). Market actors play a role in purchasing, marketing, selling business products, and even providing model ideas and product designs. Thus, all business actors must be connected with market actors for smooth and progressive businesses. Market actors, according to creative industry business actors, are involved and played important roles in the industry. Zahra & Abdelgawad (2014); Sokół & Słupińska, (2019) suggested that the roles of market actors in the entrepreneurial ecosystem are divided into two. First, they market in the form of large companies providing resources, places, and commercial opportunities (contracts or initial consumers). Second, they provide networks. Networks encourage the creation of new businesses from the knowledge and are the main source of information, resources, and access to domestic and international markets. The most connected market actor with creative industry business actors in East Priangan region includes the distributors (12.0%). The role of distributors is to market and sell products of the business actors. Distributors also often provide input to improve quality to be preferred by consumers. Certain

distributors do not provide capital assistance to keep business products from switching to other distributors.

The results of the questionnaire data processing showed that all creative industry business actors in East Priangan region had a relationship with community actors (100%). The relationships between business actors and community actors exist because of the condition of mutual need among them. Business actors need workers, who are easily obtained from the surrounding community, to run their businesses. Therefore, community actors, similar to market actors, cannot be separated from creative industries in East Priangan region. The need for ecosystem strategies comes from the fact that a unique and complex environment or ecosystem evolves in communities, where entrepreneurship occurs with regularity or self-preservation. Relationships with many actors involved in the entrepreneurial ecosystem increase entrepreneurship skills and productivity (Černevičiūtė & Strazdas, 2018). This relationship certainly affects the regional entrepreneurial culture in the ecosystem of a region. The concept of regional entrepreneurial culture is often used for the level of social acceptance and encouragement of entrepreneurial activities (Beugelsdijk, 2007; Fritsch & Wyrwich, 2012; Andersson & Henrekson, 2014). Community actors connected with creative industry business actors in East Priangan region included surrounding communities (68.1%) and community leaders (31.9%). Thus, the surrounding community actors had greater role than other community actors in the entrepreneurial ecosystem of creative industries in East Priangan region. The role of surrounding communities in the industries was mainly related to employment. Many surrounding communities were mostly involved as craftsmen or artisans and employees. Workers from the surrounding communities included neighbors, underprivileged communities, unemployed young people, and children dropped out of school. The surrounding communities were the most supporting actors, who encouraged the advancement of these creative industries because finding workers who can weave, is difficult. Therefore, the surrounding communities were trained to master the ability to weave and greatly helped the business actors in running their businesses. The surrounding communities were also considered the most influential actors because handicraft is a labor-intensive product that cannot be performed by only one or two craftsmen. It requires the involvement of many people.

Indicator of Bond Strength

The results of the questionnaire data processing showed that the creative industry business actors in East Priangan region trust (84.0%) their fellow business actors. Thus, the majority of creative industry business actors in East Priangan region had a strong bond with one another in running their businesses. The bond between business actors was strengthened because they were business partners (30.9%) and had a long-standing relationship (26.6%). Being a business partner and having a long-standing relationship led to a strong sense of trust and bond between fellow creative industry business actors in East Priangan region. Business actors are the parties asked for advice, especially for matters related to production and marketing issues. Most business actors started their businesses together. Thus, they know each other's character.

Problems arising in the business are also often discussed together because most of them are partners and all business risks affect each party. This finding indicates the bond among business actors that arises due to a sense of togetherness and the need to help each other for the sake of business continuity.

The results of the questionnaire data processing showed that the bond strength was dominated by an attitude of lack of trust (31.9%) and sufficient trust (29.8%). Hence, the majority of business actors had a weak bond with the government actors. In other words, the relationship between business actors and the government in the creative industries in East Priangan region still needs to be built and improved. The main reasons underlying the weak bond between the creative industry business actors in East Priangan region and the government were the lack of socialization (25.5%) and training activities (11.7%).

The results of the questionnaire data processing confirmed that the dominance of creative industry business actors in East Priangan had an attitude of mistrust (40.4%) and trust (29.8%) toward banking actors. Therefore, most business actors had no strong bond with banking actors. The main reason underlying the weak bond between the creative industry business actors and banking actors in East Priangan was the doubt of the loan risk to be borne (40.3%).

The results of the questionnaire data processing showed that the dominance of creative industry business actors in East Priangan region had an attitude of mistrust (60.6%) and trust (19.1%) toward professional actors. Hence, most business actors had no strong bond with professional actors. However, the reasons arising from the business actors illustrate positive perspectives on professional actors, including the belief that professional actors had useful programs (34.6%) and provided assistance (19.25%). This finding indicates that professional actors reach a small proportion of creative industry business actors in East Priangan region. Meanwhile, most business actors are still not reached.

The results of the questionnaire data processing suggested that the creative industry business actors in East Priangan region had an attitude of trust (89.4%), lack of trust (6.4%), and sufficient trust (4.3%) toward market actors. Therefore, most creative industry business actors in East Priangan regency had a strong bond with market actors. The reasons underlying the strong bond between the business actors and market actors were the long-standing relationship (42.6%), business partnership (25.5%), and the assistance given by distributors in sales (19.1%). Meanwhile, intensive betrayal (2.1%) and lacking sales (2.1%) cause a small proportion of other business actors to have weak bond. However, market actors were considered to have played a role in the creative industries in East Priangan region by establishing a good relationship with business actors; they have become business partners and assist in sales, thereby fostering business actors' trust towards market actors in the industries.

The results of the questionnaire data processing showed that the creative industry business actors in East Priangan region had an attitude of trust (92.6%) and sufficient trust (7.4%) toward community actors. Therefore, most creative industry business actors in East Priangan region had a strong bond with community actors, and a small number of other business actors had a sufficiently strong bond. The community actors have a good role in the creative industries in East Priangan region to instill a sense of trust in business actors in the industries.

The strong bond between the business actors and community actors was caused by the community actors that provided support for business progress (33.0%). They often interacted with business actors (24.5%), and several local people were employees of the business actors (21.3%). Therefore, community actors had a good role in their involvement and supported the business actors in developing their creative industries in East Priangan region.

Dimension of Heterogeneity

The heterogeneity dimension is measured from the perspective of business actors related to the knowledge, competencies, and resources in conducting their businesses. The results of the questionnaire data processing (2018) showed that most creative industry business actors in East Priangan region required relatively diverse knowledge (45.7%) related to weaving methods (37.8%), marketing strategies (20.3%), and product designs (16.2%) in running their businesses. The results of the questionnaire data processing revealed that most business actors in the creative industries in East Priangan region had relatively diverse competencies (50.0%), such as weaving (31.7%), designing products (15.9%), and managing raw materials (11.0%), in running their businesses.

Moreover, the results of the questionnaire data processing showed that most business actors in the creative industries in East Priangan region required relatively diverse resources (38.8%), including raw materials (46.1%) and human resources (32.3%), in running their businesses.

Dimension of Interaction Frequency

The dimension of interaction frequency is the interaction intensity of actors, showing how often actors interact with other actors in a network. The results of the questionnaire data processing showed that most business actors (84.0%) frequently interact with other business actors in conducting their businesses in the creative industries in East Priangan region.

The results of the questionnaire data processing proved that most business actors had never interacted with the government (61.7%), and the remaining business actors frequently interacted with the government (34.0%). Certain business actors that interact with the government claimed that the government actors with whom they had the highest frequency of interaction included the Office of Industry and Trade (31.9%), the Office of Cooperatives, SMEs, and Trade (29.8%) and the Office of Cooperatives, MSMEs, and BMTs (23.4%). The results suggest that the Office of Industry and Trade is the government actor with the highest frequency of interaction compared with other government actors.

The results of the questionnaire data processing (2018) showed that most business actors had never interacted with banks (57.4%), and the remaining business actors frequently interacted with banks (41.5%). Therefore, the interaction of business actors with banks was dominated by two types of frequency (never and frequently). Certain business actors that interact with banks claimed that BRI (78.6%) was the banking actor with whom they most frequently interacted

with, followed by Mandiri (11.9%) and BJB (9.5%). In other words, BRI was the banking actor, who interacted most with the business actors compared with other banking actors.

The results of the questionnaire data processing (2018) showed that most business actors never interacted with professional actors (86.2%). The other small portion rarely interacted (11.7%), and the remaining actors (2 of 94 respondents) frequently interacted with professional actors (2.1%). In summary, the majority of business actors had never interacted with professional actors. The other small portion interacted rarely, and the remaining two business actors had frequent interactions. Certain business actors that interact with professional actors claimed that ITB was the professional actor with whom the creative industry business actors had the highest frequency of interaction (40%). Thus, ITB was the professional actor with whom the business actors most frequently interacted compared with other professional actors.

The results of the questionnaire data processing (2018) showed that all business actors (100%) in the creative industries in East Priangan region frequently interacted with market actors. These results reveal the similarity in the frequency of interactions in the three creative industries in East Priangan region, where most of the business actors frequently interacted with market actors. The distributors were market actors, who most frequently interacted with the majority of creative industry business actors in East Priangan region. Several approaches of interaction applied by the business actors with distributors were through marketing activities and discussion processes by providing innovative product design ideas that match market demands to creative industry business actors in East Priangan region.

The results of the questionnaire data processing (2018) showed that the majority of creative industry business actors in East Priangan region frequently interacted with community actors (97.9%). The surrounding communities (68.1%) include the community actors, who most often interacted with all creative industry business actors compared with other actors because most workers in the creative industries came from the surrounding communities. The business actors interacted with the surrounding communities every day, especially those involved in the industries, including workers and craftsmen as well as families participating in managing the businesses. The interaction occurred not only in the context of work but also in daily life. Work-related interactions generally occur through shared learning processes, where the business actors directly teach weaving methods, discussion processes, and work instructions. Moreover, certain norms in the communities affect businesses, such as shared understanding of the importance of helping each other, allowing the business actors to empower the surrounding communities by employing them in the businesses. The role of actors in the creative industries increasingly shows the importance of good collaboration between actors in the entrepreneurial ecosystem because it ensures that the existing cycle in the entrepreneurial ecosystem form an innovation system, especially the regional innovation system (Carayannis et al., 2011).

Dimension of Network Size

The density of a network is a comparison between all existing relationships with all possible relationships. In measuring the density of social networks, the dense network is

relatively close. The highest value for density is 1, and 0 is the value for no density. The measurement results show that the density of the creative industry entrepreneurial ecosystem had a value of 0.039 (approaching to 0), indicating a low density in the overall data. Therefore, very few actors are involved and connected in the creative industry entrepreneurial ecosystem in East Priangan region. This condition indicates that each entrepreneurial ecosystem has symbiotic relationship between different stakeholders, not only in terms of trade but also as a solution to economic and social problems (Xavier et al, 2013; Neumeyer et al., 2017).

CONCLUSION

The interaction of actors and factors in the creative industry entrepreneurial ecosystem in East Priangan region based on the network theory perspective shows that interactions in the context of knowledge transfer between one and another business actors occur in the form of daily conversation and discussion of product design ideas and market demand trend information. Knowledge transfer processes from government to business actors occur through several government programs including training programs, partnerships, institutional strengthening, and product exhibitions. In certain training programs, government actors collaborate with professional actors (universities) to act as instructors or informants in these activities. The professional actors (universities) play a role in knowledge transfer processes through research activities, student internships or job training, student final projects, and community services in the form of training on entrepreneurship, product design and marketing, and improvement of raw material quality. For business actors, the implementation of these activity programs by government and professional actors (universities) is still very limited, not widely socialized, inconsistent with the needs of business actors, and often unsustainable. Thus, it does not significantly affect innovation ability development of creative industry business actors in East Priangan region. Most business actors, who participate in the government and professional programs, are reluctant to re-join such programs due to the lack of benefits obtained. However, their time, in which they can earn money, has to be sacrificed for joining such programs.

Similarly, business actor interactions with banking actors are limited only through the involvement of banking actors in government programs (KUR and Partnerships) and the relationship between customers and creditors for business actors, who utilize KUR or private loan funds. For business actors, banks do not play a role in the progress of this creative industry due to the lack of information received and known by business actors regarding access to capital for business funds by banks, as well as the difficulty to satisfy the requirements to obtain business funding assistance.

On the contrary, the involvement of market actors in transferring knowledge to business actors is related to demanded products with certain designs that encourage business actors to innovate in realizing these demands. Meanwhile, the role of community actors (surrounding communities) as employees and craftsmen in the knowledge transfer processes is to realize product designs that have been planned by business actors. In the knowledge transfer processes to support innovation in creative industries, another main leverage factor includes market actors.

Market actors, through the demand for their products (market conditions), become the main impetus for business actors to productively (productive entrepreneurship) innovate products assisted by community actors (surrounding communities). On the contrary, government, banking, and professional actors have very limited involvement and interaction with business actors in the process of transferring knowledge in the creative industry entrepreneurial ecosystem in East Priangan region.

Further research is suggested to consider the use of a dynamic system perspective to describe the causal relationship between actors involved in the entrepreneurial ecosystem. The resulting causal relationship will help find leverage factors that can increase the resilience, health, and competitiveness of the entrepreneurial ecosystem.

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