

## **Open Innovation on Entrepreneurial Knowledge Intermediation Through Social Media Creative Development: A Case Study of Creative Cities in Indonesia**

<sup>1</sup>Iwan Hermawan, <sup>1,2</sup>Sartono, <sup>3</sup>N. Ghoniyah and <sup>1</sup>Luqman Khakim

<sup>1</sup>Department of Bussiness Administration, Politeknik Negeri Semarang, Semarang, Indonesia

<sup>2</sup>Faculty of Economics, Universitas Diponegoro, Semarang, Indonesia

<sup>3</sup>Faculty of Economics, Islamic Universty of Sultan Agung, Semarang, Indonesia

**Abstract:** The dynamics of global business and knowledge-based economic paradigm has made ideas, thoughts, concepts and knowledge as the key capital of entrepreneurial business at this time. The need for the idea of the infinite and always renewable a major prerequisite for entrepreneurs and creative SMEs in order to survive. Knowledge is an asset as well as “ammunition” to create a new creative product. Synergy of internal knowledge agencies with external agencies in line with the spirit of open innovation, i.e., synergy that would enable SMEs to have backward linkage relationship with suppliers and forward linkage with consumers that will eventually culminate in the formation of a new creative market. In line with the spirit of open innovation, a search for Creative Social Media (CSM) Model has become a strategic issue in the current economic paradigm. CSM is a social networking system that is essential in its capacity as a repository and knowledge intermediation for entrepreneurs. Knowledge recommender system will be the main engine of the CSM system used to provide recommendations in the context of sharing knowledge reference between entrepreneurs in a same cluster and in the spirit of anti plagiarism design as ethical boundaries. On the other hand, CSM also played as a tool to win a battle of creativity among entrepreneur’s entities in the the world without boundaries. Thus, CSM plays the role of encouraging the growth of the creative city network around the world, facilitated by the United Nations Educational, Scientific and Cultural Organization (UNESCO). CSM studies in the form of identification of: features, frameworks and user requirements obtained through observation of the creative entrepreneurs in Denpasar, Yogyakarta and Surakarta which is part of the creative cities in Indonesia.

**Key words:** Creative entrepreneur, creative social media, knowledge intermediation, equirements, Indonesia

### **INTRODUCTION**

The dynamics of the economy has entered a knowledge-based economic paradigm that points to the existence of ceative industry. The emergence of the creative industries is strongly associated with the emergence of cultural industries, the importance of knowledge on all aspects of economy: production, distribution, consumption and the growing importance of the services sector. The dynamics of the new economy formed will be more informative, global and networked. Informative means productivity and business entity competitive advantage in the economy depends on their capacity to process and implement information effeciently based on knowledge. Global means core production, consumption, circulation activities and their components held globally. Networked means under new situation, productivity competition of the business entity will be played through interaction in the global network (Castells,

2010). Knowledge and innovation have become key crucial factors in the new economic paradigm with the human resources as driving agents. Entrepreneurship and innovation aspects will increase entrepreneurs amount because technology enable production autonomy through knowledge mastery. Creation of creative products to be accepted in the market increasingly depends not only on quality and comparative advantage of products but rather on the direction of content innovation and novelty of products offered on the market. Knowledge-based economic paradigm will also focus on the creation of value through the power of creativity. It will make brilliant thoughts and ideas will be more expensive than money. Transformation of an idea into a new creative product will be required as entrepreneurial prerequisite for survival. Limitations of creative ideas from SMEs to create new crative product and survive in the era of the knowledge economy becomes actual strategic issue that will be the topic of discussion in this study. Ideas,

methods and knowledge can be acquired from within or from outside the business entities in order to establish a new market, simultaneously, R&D will be reduced its role as basic philosophy of the concept of open innovation (Hossain, 2015). Studies on creative entrepreneurship in Denpasar, Yogyakarta and Surakarta. have shown a shift in values in the aspect of capability from traditional entrepreneurs to be creative entrepreneurs. Spirit of anti plagiarism, independence design and needs of unique different power attributes of the product is the new aspects of the capability of entrepreneurs who emerge in creative industries. Building a creative industry can not be solved simply by building government ministries and infrastructure. Social science information flow will become an asset that have to be managed properly (Potts *et al.*, 2008). Media in the concept of sharing knowledge context is strategic to join with the spirit of open innovation. Creative media network is modified specifically used by entrepreneurs and creative SMEs to share knowledge, thus, its function converted into CSM.

CSM framework designed to bridge the limitations of ideas, actualization and creative products to create new markets. Actualization of the product refers to the spirit of anti-plagiarism as an ethical frame. Sharing knowledge on the system will become inter mediation module of knowledge and to entrepreneurs. Iteration information and knowledge in CSM encourage entrepreneurs to create new products derived from the knowledge set recommended by CSM system and this iteration will become open innovation creative market life cycle.

The second aspect to be achieved by CSM development is innovation competitiveness. The competitiveness will be reached through creating creativity competition among entrepreneurs that representing the reputation of a city and state where the CSM will choose creative cities at the beginning of each month this competition will encourage SMEs to innovate continuously to emerge new creative cities on UNESCO creative city network (Fig. 1).

### Theoretical background

**Entrepreneurship and creative city:** Creative industries have become one of important business issues in the new economy of the 21st century. The creative industries are carrying the spirit of knowledge-based emphasis on the concept of individual original creativity, skill and talent which have potential for wealth and job creation through generation and exploitation of intellectual property. Creative industries sector in this study included nine sectors refer to advertising, architecture, designer fashion,

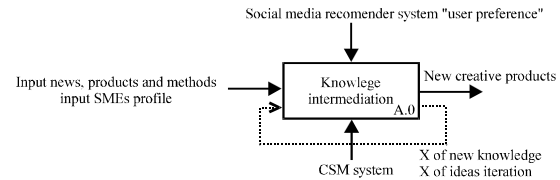


Fig. 1: Intermediation ideas on CSM

movies, music, computer software, publishing, television and craft. The essence of the spirit of this creative industry is the value of entrepreneur human capital that become a key factor and driving force in the industry. The creative industries are the backbone of economy structure of a based on knowledge in a country where as a business entity, entrepreneurs required to have intellectual property and ideas that should always be renewable to exist in the creative industries. Other supporting the strategic aspects of creative industries development is the role of social networks as well as personal entrepreneurial competencies in the field of ICT to create business competitiveness. Entrepreneurs competency is very influential on their business achievement succeed. It is because entrepreneur is a business owner as well as the manager for himself, thus, personal and business networking capabilities of entrepreneurs have a significant impact on their business performance (Meutia, 2013).

Creative entrepreneurs in Indonesia have commitments related to the design independence. They commit not to plagiarize any design. However, the biggest obstacle in today's knowledge-based industries is saturation in SME's and entrepreneurs' design of products. Limitations of ideas is crucial that experienced by SMEs and this will threaten the balance of the spirit of anti plagiarism harmonization which has been owned. In line with the trend of global trade, cultural issues and issues of creative economy that are growing, UNESCO facilitate creativity, innovation and culture development by establishing a network of creative cities world. The cities network includes six fields creative work such as movie, craft and folk art, design, gastronomy literature and media arts. UNESCO steps are as the appreciation of the cities with the performance of creativity on the preservation of cultural and technological innovation involving socio-economic, socio-cultural and socio technology with good governance. A city defined by UNESCO as a creative city with an index referring to the criteria set by UNESCO. A city defined by UNESCO as creative city with an index reffering to the criterias set by UNESCO.

## **MATERIALS AND METHODS**

**Open innovation:** Domain role of technology and the Internet as information machine which create all disciplines can find abundant knowledge. Study on open innovation continues to grow since the concept first introduced by Henry Chesbrough. The concept of open innovation emphasizes the use of purposive inflows and outflows of knowledge to accelerate internal business units and to expand markets by relying on the use of external innovation business unit. For the SME, open innovation has commercial benefits for the initial activities such as R&D but open innovation involves various central issues such as culture and litigation. Open innovation is deeply rooted in local culture so it needs to be explored in the context of the various studies (Hossain, 2015).

The proliferation of databases of scientific public, online journals and articles were combined at the rate of internet and transmission rates are getting cheaper will provide access to the intellectual property that is very expensive in the earlier era become abundant to be obtained refers to the essential value of the application of open innovation at an enterprise. Knowledge is an asset that underlies the formation of brilliant ideas that need to be managed. Knowledge is the resources attached personally useful in improving learning and decision making, it is important for business entities to benefit from knowledge sharing activities on repository of knowledge management system (AlBusaidi *et al.*, 2010). Knowledge innovation has become a competitive tool, to create a competitive advantage. Knowledge management and innovation management need to be managed by creating innovation knowledge management as knowledge assets. With its capacity, knowledge innovation will evolve to grow in line with the dynamics of the business environment (Goh, 2005). On the other hand, a growing need the current role of entrepreneurs to be able to create independence of designs and different power unique to survive. It is a problem which should require a solution that can be taken in the form of product creation from idea obtained from public social knowledge is abundant in line with the open Innovation.

**Social media:** Social media is a computer device that mediates the person or enterprise to create, share and exchange interests and information (Buettner, 2016). Developing a successful marketing strategy and social networking is an essential part of online success and one of the prerequisites of entrepreneurial success. The concept of a social network is a community of a group of people to share information knowledge and interests or

interested exploration and other activities. Various kinds of variations for interaction between users provided in the system in general such as email chat, messaging, video, file sharing and features discussion groups (Isoraite, 2014). Framework of social media as a social network can refer to a standard framework with three major domains such as social media goals, strategy and setup. Purpose defines business objective of the built system. Strategy will relate to people, content and platform of social media and domain setup in the form monitoring, analytics, reporting and internal organization. The essential thing in this architecture is the system's developers must understand the purpose of the construction of CSM and connect with the business or the value of the benefit in this case is interest to share knowledge among creative entrepreneurs. Building model of creative industries based on social network theory will pave the way unification analytic framework among behavioural economics, institutional economics, media and cultural studies and other domains (Potts *et al.*, 2008).

## **RESULTS AND DISCUSSION**

Development of creative media social model is based on a study of the needs of the user and the existing condition of 113 creative entrepreneurs and SMEs in the creative cities in Indonesia such as Denpasar, Surakarta and Yogyakarta. The three cities are strategic cities that are used to describe the user requirement. It is because in these towns, cultural profile is attached firmly, like: royal, king, palace, atmospheric local culture, its style peculiarities of the ornament design, heterogeneity and openness community and most importantly, the three cities are the leading tourism destinations that are used for storefronts export markets for the products of the creative industry entrepreneurs from various regions. Early studies of the research is to obtain a picture of readiness of entrepreneurs in adopting network-based knowledge service media. Entrepreneurial today have understood the spirit of knowledge based economy with the values of the factors driving the industry in the form of knowledge and a brilliant idea is a key capital in industry (59.3%). Lifestyle related defining technology (74.6%).

Creative entrepreneurs in these three cities largely have smartphones and the Internet connection which means technological readiness, business operators in developing countries, in this case in Indonesia has been ready to adopt social knowledge based technology. Thus, even though they struggled with the traditional culture but at this time creative entrepreneurs in Indonesia do not have the anxiety of using modern technology such as

mobile media. Entrepreneurs profile capability in the paradigm of the creative economy in these three cities also have experience shift. Character capability transform from the aspect of innovation, pro-active and take risks become have new aspects of the creative entrepreneurial characteristics such aspects: the reliability of management effort, anti-plagiarism in their form of independence aspect of design and the aspects of unique ability to be different on the creative product. Aspects pro active and risk management on the previous concept of conventional entrepreneurs melting into aspects of reliability management while aspect of innovation has developed into aspects of the ability to create unique products with different power and which is subsequently used as a borderline intellectual property ethics in knowledge sharing. Despite the entrepreneurial capability in terms of the independence of the design and the spirit of anti plagiarism has not significantly impact on business unit performance, however, large number of entrepreneurs has committed not to plagiarize other people's ideas and products (66.5%). Research facts that are obtained through observation demonstrate that both SMEs and entrepreneurs has begun experience limitations of ideas and saturation design, access to such sources of reference materials knowledge that are owned entrepreneurs creative, it is also an opportunity relations entrepreneur with suppliers (B2B) and entrepreneurs with customers (B2C). If those are still limited, thus, it becomes difficult to create a unique new product in the context of anti plagiarism. Those problems are the impact of the knowledge-based economy paradigm and this phenomenon is the responsibility of the CSM. Observation research on this study also generates creative description of entrepreneur's needs of CSM system user. The profile of the features of the system is shown in Fig. 2.

On the other hand, the spirit of open innovation enables enterprise creates acceleration competitiveness by eliminating R and D Silo and opens the gap of knowledge between internal units and an external agent for the formation of new markets. Departing CSM philosophy that refers to knowledge gained from SME to SME, from entrepreneurs and for creativity entrepreneurs, "create your actual products and colour your city" Will be the slogan that is used as a basis in knowledge sharing on social media creative. Users can login to the system that would get a reference of knowledge according to patterns of user characteristic preference of similar cluster. In CSM, user can perform product publications by filtration using anti-plagiarism index to create user appreciation value of CSM on other similar creative products. CSM allows their chances relation in enterprise B2B and B2C tow to support the formation of new markets created by iterating

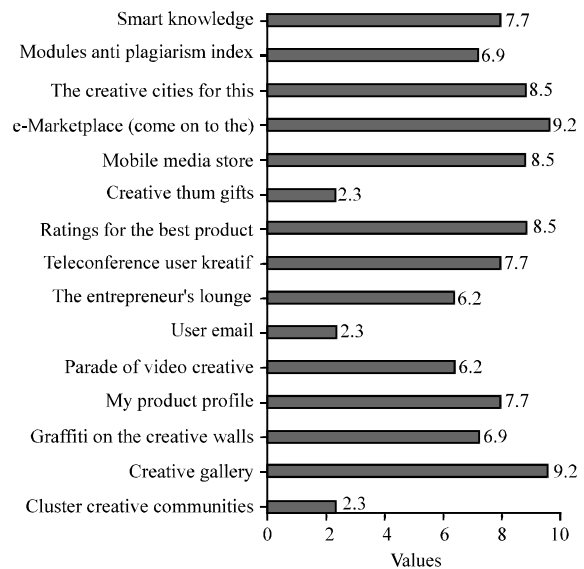


Fig. 2: Level of user request of social media creative (in percent)

ideas that were excavated previously. CSM as an intermediary knowledge will represent the spirit of open innovation as well as a solution of problems, for example, the limitations of the idea of being owned by entrepreneurs where the idea is not limited has become a prerequisite to survive in a creative environment will be things that are not impossible to achieve. Framework social media creative developed will be modified from third wave framework strategy.

**Goals:** The purpose of the development of CSM is as a medium for spreading knowledge, creating an acceleration of competitiveness for products and new markets seta encourage the growth of the creative city network of the world by UNESCO.

**Strategy:** The main users of the system CSM is entrepreneurs' field of creative industries and creative SMEs as a single business entity. Identity form: the type of sector, location of the business and the products and as well as the name of the store are identified by registration on the user login. Smart knowledge recommender system in the form of CSM module is utilized to provide knowledge relating to creative scores of the user. The user preference approach is used in constructing the algorithms engine. CSM architecture can pointto platform avaiability on PCs and mobile media, open web and responsive platform design that is recommended.

**Setup:** Monitoring, analysis and evaluation utilize to capture change management both in terms of technology

and business layer, CSM development team that manages network social knowledge access will be better if managed by government departments or private non-profit enterprise. Domain IT Government of Control Objective Information and related Technology (COBIT) is recommended to be referred as a detail unbiased approach in managing CSM.

CSM development is very important and in line with UNESCO's role to encourage creativity and culture by establishing a world creative city network in the field of socio cultural and socio technologies. CSM bridges creative city appreciation spirit by building creative city system modules. Creative city is defined by the up load index of product design profile, innovation and also impact rate of the potential benefits value of knowledge gained by entrepreneurs and its feasibility to be converted into new creative products. Identity in the form of name profile of the creative city will be reset at the beginning of each month. Module creative city will create a battle between entrepreneur's creativity within a country and between countries without border. Creativity wardeliberately created between cities to encourage appreciation, also to develop awareness of intellectual property values.

Protection of intellectual property, anti-plagiarism applications and forming the formulation recommendation of a city designated as a creative city will be completed automatically by the system CSM. CMS categorizes the product profile as a pioneer product or product followers. Pioneer product is the creative product which has a new design pattern and was first shown in public in the CSM. Creative product that has been uploaded and is indicated as a pioneer product will have a prestigious value and get a high rate for both personal brand SMEs and rate input to its origin city where it lived as a candidate of Indonesia creative city.

## **CONCLUSION**

CSM has strategy role as knowledge intermediary of entrepreneurs and creative SMEs by ensuring the emergence of iterations of ideas from creative entrepreneurs that can be used to create a new creative product on the market and become the life cycle. Knowledge recommender system with user preference algorithm is used as the main engine of intermediation. Other important aspect of CSM is the realization of the purpose of acceleration performance of the industry. It is needed to accelerate entrepreneur's competition to become more creative on representing their cities, deliberately created by setting up a battle for creative city concept. Battle of the creative city would encourage

SMEs in a city to actualize their creative products better and CSM take a role in encouraging the formation of new creative cities in the world network of creative cities sponsored by UNESCO.

## **LIMITATIONS**

Limitation of this study are first, the sample contains only three cities with strong cultural traditions in developing countries, in this regard Indonesia. Second, this study conducted only on nine industrial sector, thus, it still requires a broader cross check of comparative studies to sharpen definition of user requirements and architecture framework model that is ideal for the development of social media creative.

## **RECOMMENDATIONS**

Amount of pioneer products are very important to influence the multiplier effect of knowledge to other SMEs in the same cluster. Furthermore, responsibility and mediation issues arise regarding the legal determination of the product and the definition of national creative cities which are beyond the control of CSM system, the recommended solution is the responsibility of the Ministry of SMEs in coordination with the Board of Creative Economy of Indonesia as legal arbitration unit.

This study provides novelties in the form of intercept across disciplines, both in the areas of knowledge management, social media and open innovation that require deeper advanced research.

## **ACKNOWLEDGEMENTS**

This research partially was supported by competitive research grant of Ministry of Research and Higher Education Indonesia.

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