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A Competency Model for SMEs in the Creative Economy

Atya Nur Aisha[a], Iman Sudirman[b], Joko Siswanto[c]
Made Andriani[d]
[a] *Department of Industrial Engineering, Telkom University, Indonesia*
Department of Industrial Engineering and Management
Institut Teknologi Bandung, Indonesia
atyanuraisha@gmail.com
[b] *Department of Industrial Engineering, Institut Teknologi Bandung, Indonesia*
iman_s@mail.ti.itb.ac.id
[c] *Department of Industrial Engineering, Institut Teknologi Bandung, Indonesia*
j.siswanto@ti.itb.ac.id
[d] *Department of Industrial Engineering, Institut Teknologi Bandung, Indonesia*
mdandriani@mail.ti.itb.ac.id

ABSTRACT

The creative economy becomes a source of sustainable economic growth based on innovation and creativity. A creative and innovative business requires human resources with the necessary competence. Research on competency within the creative economy has primarily focused on either each subsector or on large-scale enterprises. Thus, there is a lack of competency research concerning creative economy small and medium enterprises. This study aims to develop competency models for SMEs in a creative economy based on the results of the literature review. A comparative analysis of the competency models was conducted to obtain the proposed competency model. The proposed competency model framework consists of three levels: competency category, competency area, and competency element. The result of this study indicates that there are 28 competency elements across the three competency categories. Besides, there are differences in the needs of competency elements for managers and workers in the creative-economy SMEs. These findings can be used as a basis for government and business actors to apply competency-based human resource management for the managers and workers in the creative-economy SMEs.

JEL Classifications: O15, O31, O53

Keywords: competency; competency model; manager and worker; creative and innovative business; SMEs

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I. INTRODUCTION

In the present era of globalisation and free trade, one of the emerging sectors is the creative economy (Indonesian Creative Economy Agency, 2017). Globally, creative and cultural industries (CCI) also play an active role in economic development. In the Asia Pacific regions, this sector contributes to the revenue value of US $743 billion and absorbs 12.7 million workers (Ernst and Young, 2015). Many of the factors that reinforce the influence of the creative industry on the regional and national economy concern the development of media and information and communication technology. Thus, it is important for organisations to possess the corresponding skills (Mietzner and Kamprath, 2013).

Creativity and innovation produced at the individual and group levels are the keys to the wealth of a nation in the 21st century. Furthermore, people are the key to sustainable development as they can promote economic growth, social development and environmental protection (United Nations Educational, Scientific and Cultural Organisation, 2013). The CCIs have a good prospect for business and employment prospect in developed countries, which can exploit their cultural diversity (Barcelona Activa, 2011).

In Indonesia, the creative economy sector contributes to the national gross domestic product (GDP) 7.38%, and with regard to employment, comprises 13.9% of the total workforce. This sector has also contributed $19.4 billion in export value by 2015. Indeed, the creative economy sector in Indonesia has significantly increased the national economy by an average of 10.14% per year within the last 5 years (Indonesian Creative Economy Agency, 2017). This indicates that the creative economy sector possesses substantial potential for future development.

Growth of the creative economy sector is driven by businesses developed from the ideas or creativity of human resources (Indonesian Creative Economy Agency, 2017). Individual creativity is a key asset for coping with external changes and growing trend patterns (Mietzner and Kamprath, 2013) to achieve a sustainable competitive advantage. Thus, the development of this sector requires more talented, creative resources. The workforce in the creative economy sector has a high turnover rate and high level of competition (Bridgstock, 2011). However, to outdo the competition, these creative human resources must meet equally high requirements (Li and Sun, 2016). Due to the importance of human resources in these industries, companies must attract creative potential through high-skilled recruitment (Mietzner and Kamprath, 2013).

One of the main difficulties faced by running a business in the creative economy sector is the low level of human resource skills (Bank of Indonesia, 2015). Based on data from the Central Bureau of Statistics (2017), the condition of human resources in the creative economic sector is still dominated by workers with a high school education background equivalent (57.20%). Therefore, one of the proposed strategies for developing the creative economy is the development of HR competencies in the creative economy (Ministry of Industry, 2009; Simatupang et al., 2012).

Developing creative potential can be done by increasing the competence possessed by creative human resources (Galovska, 2015). Thus, competency is a necessary resource and, it can be seen that managing competency can enhance value in human resource strategy (Dai and Liang, 2012). The application of competency approach should begin by compiling the competency model. The competency model is a simple list or catalogue

that demonstrates the competencies required in a position, group of positions, organisation, or process (Markus et al., 2005; Marrelli et al., 2005).

The creative economy sector is dominated by small and medium enterprises (SMEs) that minimise economic disparities in society (Muizu and Hilmiana, 2016). Differences in business size, location and managerial style can occur between subsectors within the creative economy. However, all the creative economy subsectors clearly ascertain the importance of creative human resources as an asset for business continuity (Mietzner and Kamprath, 2013).

Because research regarding creative human resources and competency within the creative economy sector is limited, a literature review is necessary to fully understand the application of competency within the creative economy sector. The main research question for this study is to seek answer for "What is the competency model for SMEs in the creative economy sector?" This study aims to develop competency models for creative economy SMEs based on the results of the literature review. Furthermore, a comparative analysis of the list of competencies used in previous research was conducted. From the results of this analysis, a theoretical competency model is proposed for managers and workers within the SME creative economy sector. The compiled competency model contains a list of generic competencies required for the managers and workers of SMEs. Recommendations for the implementation as well as future research opportunities on the competency model for creative SMEs is provided in the conclusion.

II. LITERATURE REVIEW

Literature review section will discuss about two concepts in this study, namely creative economy and competency model. In the creative economy will be discussed about the definition as well as several subsectors that included. The competency model section discussed about the definition and approach in designing the competency model.

A. Creative Economy

There are several terms used to describe the creative economy sector, which include "creative economy", "creative industry", and "creative and cultural industries. In this section the definition of each concept will be explained.

The creative economy is a business sector that concerns the fields of art, knowledge and technology, in which creativity from the human resources are the primary domain of the business (United Nations Educational, Scientific and Cultural Organisation, 2013). Value-added creations are based on the ideas or creativity of creative people and the utilization of science, including cultural heritage and technology (Indonesian Creative Economy Agency, 2017).

The creative industry is defined as a commercial enterprise that sustainably manages creativity and intellectual property, i.e. its main resources, to generate profit (Matheson, 2006). Creative industries include companies that create, produce or distribute products and services that are culturally and creatively based. Products and services resulting from the creative industry are heavily dependent on technological development, as they act as innovative drivers for new technological products (Mietzner and Kamprath, 2013).

The third concept, CCIs, are defined as business activities that produce, promote,

distribute or commercialize products, services and activities related to the region's culture or art (Ernst and Young, 2015). According to the United Nations Educational, Scientific and Cultural Organization (2013), CCIs are present in two industries, namely the culture industry and the creative industry. The culture industry refers to the production and consumption of activities that symbolize or are related to culture, while the creative industry includes broader productive endeavors, including those products and services produced by the culture industry or those that are the result of technological innovation processes.

Of the three definitions of the creative economy, creative industry and CCI concept, they all refer to business activities based on creativity and / or innovation to produce products and services. The definitions differ, however, with regard to regional rules (United Nations Educational, Scientific and Cultural Organization, 2013). In Indonesia, creative economic concepts are used because the creative economy has a broader scope than the creative industry. The creative economy sector is a source of economic, social, cultural and environmental value creation (Indonesian Creative Economy Agency, 2017).

B. Competency

Before discussing the competency model, it is necessary to first introduce the concept of competency. Competency is the fundamental characteristic of a person, which can be a motive, a talent, a skill, a self-concept, or supportive knowledge, and which can affect the resulting performance (Boyatzis, 1982; Spencer and Spencer, 1993). The competency element must be objectively measurable (Marrelli et al., 2005).

Spencer and Spencer (1993) define competency as a fundamental characteristic of an individual that influences the standard criteria and performance produced in a situation or job. According to Marelli et al. (2005) competency is measurable human capability and is needed to create an effective performance. Based on this definition, individual competency is an underlying characteristic of individuals that can be measured and contribute to the individual performance produced.

Competency shows the personality of an individual and can be used to predict individual behavior and performance in carrying out activities. Every individual has competencies that are different from each other (Spencer and Spencer, 1993). As a manifestation of individual behavior, competency can be observed and measured. Competency is a resource in an organization that needs to be fostered and developed (Marelli et al., 2005).

C. Competency Model

The role of competency is key in human resource management, because in designing the human resources program it is necessary to know the profile of the individual, as well as the needs of the job profile (Mansfield, 1996). Adopting competencies enables organisations to increase value in formulating human resource strategies (Dai and Liang, 2012). To adopt a competency approach, it is necessary to create a competency model that describes the minimum list of competencies required for a position. The competency model is the main tool in the human resource management system (Markus et al., 2005). Mansfield (1996) defines the competency model as the detailed behavioural description that encompasses the skills and traits that employees need to be able to perform the job

effectively. According to Marelli et al. (2005), the competency model is a structured framework consisting of a list of competencies necessary to effectively perform a specific job, group of work, organisation, function or process. Meanwhile, according to Campion et al. (2011), the competency model is a collection of competencies that affect the performance of certain positions, group positions or functional areas.

In designing a competency model, there are three approaches that are commonly used: the educational approach, psychological approach and organisational approach. In the educational approach, the competency model includes the outcome of knowledge, skills and attitudes from one level of education and is assessed using the standard of behaviour criteria. The compilation of competency models in this approach requires the industry to obtain a list of technical skills necessary to achieve the expected work outcome (Markus et al., 2005).

The psychological approach is also commonly used to develop a competency model. This approach revealed that individual characteristics, including motives, talents, skills, self-concept, or knowledge can predict the success of the resulting performance (Boyatzis, 1982; Spencer and Spencer, 1993). Initially, this competency model was developed for only one specific position, but once it was implemented, it developed into the compilation of competency models for multiple jobs (Mansfield, 1996). Indeed, the individual competencies that are conceptually or empirically correlated with performance can be used as the basis for employee assessment, recruitment, placement and human resource development (Dai and Liang, 2012).

The third approach is the organisational approach. This approach is based on the organisation's competitive advantage, which is derived from factors that are valuable, rare and can neither be imitated nor easily obtained externally. Hamel and Prahalad (1990) have explained that the development of core competencies is key for organisations to able to survive and thrive. Further organisational competencies need to be managed in the human resources system, as core competencies include the knowledge, skills and abilities required of all individuals within the organisation (Lahti, 1999). In this approach, the competency model aims to translate organisational strategies into individual skills and behaviours. The final output obtained is a list of competencies that need to be possessed by various functional positions to strengthen organisational culture (Dai and Liang, 2012). The competencies of all jobs need to be aligned with organizational strategies to achieve organizational performance (Sanchez and Levine, 2009).

There are generally two types of competency model development: the single-job competency model and the “one-size-fits-all” competency model. The first competency model was developed for recruitment and selection. In this competency model, there are 10-20 competencies which comprise the specific definitions and behaviours needed to produce an effective performance in specific job. However, developing the first type of competency model requires a substantial amount of time and effort. The second type of competency model contains a list of competencies for different positions, and is composed of common competencies for various job/positions. The second type of competency model is meant for individual development and placement, in accordance with the competency profile possessed by various job profile (Mansfield, 1996).

The present study seeks to obtain a competency model from previous studies that is related to the creative economy sector. The competency model was identified based on the three, previously described approaches.

III. METHODOLOGY

First, a structured literature review was conducted and subsequently, the findings were analyzed. A structured literature review is a technique for identifying libraries that are relevant to the topic to discuss. It aims to find out the subject of study, the scope of research, and the methods used in previous research so that the accumulated knowledge can be learned and develop something that has been done by others. Literature study varies according to the scope and depth in identifying research (Newman, 2014). There are six stages in conducting a structured literature review according to Page (2008): (1) defining the research question and type of literature review; (2) determine the scope of the study to be known; (3) determine the time span of the research to be involved; (4) determine the source of the search database to be used; (5) identify keywords and search strings to be used; (6) determine the inclusion and exclusion criteria used to select literature.

The scope of the study in this review structured literature is a competency model in the creative economy sector or CCIs. In this study, the literature review is not limited to years, to find out the length of research trends regarding competency models in this sector. Keywords and strings used to search the literature review databases were tailored to the scope of research.

For the literature review, three databases were used: the Web of Science (WoS), Scopus and Google Scholar. Selection of Web of Science (WoS) and Scopus database because the articles that will be published in both databases have passed a rigorous selection process. In addition, in these databases there is high correlation between the numbers of documents with the number of citations of each article (Duran and Montoya, 2018). Therefore, these databases are of sound repute. Google Scholar was also chosen as a database source due to its open framework and because it encompasses a diverse array of disciplines (Okoli, 2015) and Google Scholar is one of the general academic databases recommended as a source of library search (Page, 2008). Some previous studies also used the WoS database, Scopus (Munir et al., 2015; Duran and Montoya, 2018), and Google Scholar (Okoli, 2015; Haddaway et al., 2016).

There are several inclusion criteria used to select the literature sample that will be analyzed in this study, including: (1) Describe the list and description of competencies. This criterion is needed to answer the research objectives, namely developing a competency model. Whereas the competency model is a list of competency representations needed in positions or groups of positions or organizations (Marrelli et al., 2005), so that in the literature to be used it must include a list of competencies and descriptions relating to competencies. (2) Studies conducted in the creative industry. This criterion is used in accordance with the scope of the research object to be discussed, namely the creative economy sector. (3) Articles published in journals or conference processes. This criterion is used to ensure the results of previous studies have gone through a credible process and can be accounted for by the results of the study (Duran and Montoya, 2018).

In accordance with the stages in conducting a structured literature review, a summary of the criteria for conducting a search is presented in Table 1.

Table 1
Search and strategy string for literature review

Strategy	Description
Databases	Web of Science (WoS), Scopus, and Google Scholar
Search string or keywords	1. WoS : TOPIC (“competenc*” AND “creative industr*”) Timespan: All years. Indexes: SCI-EXPANDED, SSCI, AandHCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI. 2. Scopus : TITLE-ABS-KEY (“competenc*”) AND TITLE-ABS-KEY (“creative industr*”) 3. Google Scholar : “competency model” AND “creative industry”
Timeframe	All years
Language	English
Study field	Unspecified
Type of access to the document	Unspecified
Inclusion Were applied to titles, abstracts (and full text when it was necessary)	1. Explain the competency list and description 2. Studies conducted in creative industry 3. Article published in journals or conference proceedings.
Exclusion Were applied to titles, abstracts (and full text when it was necessary)	1. Duplicated articles from the same research 2. File could not be obtained 3. Paper presented not in English 4. Studies weren´t related to the competency topic in creative industry 5. Paper didn’t explain the competency list and definition

The results of the findings in the field were further analysed and coded based on the following criteria. Some of the criteria used to evaluate the findings based on previous research:

- Approaches in the developing competency model, consisting of educational approach, psychological approach, or organizational approach (Dai and Liang, 2012)
- Type of research, such as empirical or conceptual (Munir et al., 2015)
- The context discussed include organizational and target characteristics of the individuals (Munir et al., 2015)
- Competency type, i.e. single-job competency model (type 1) or "one-size-fits-all" competency model (type 2) (Mansfield, 1996)
- Competency alignment with organizational strategy (Lahti, 1999; Sanchez and Levine, 2009)
- Competency categories, including entrepreneurial, managerial, creative economy context (Aisha et al., 2016)

From the relevant literature, a list of initial competencies is used in previous literature. Based on this list, if there are competency elements that have similar or similar keywords, then the competency element is considered the same. This aims to eliminate the number of competency elements so as not too much (Shoop et al., 2015). To simplify the comparison process, a reference literature is used as a comparison. In this study the reference literature used as a comparison is the generic competency model of Spencer and Spencer (1993) which has been used as a reference in various previous studies

(Siswanto and Andriani, 2009; Wu, 2009; Ryan et al., 2012) and has definitions complete competency and competency clusters. If there are found competency elements that have not been included in the reference, it can be proposed to be added (Siswanto and Andriani, 2009; Monang et al., 2016).

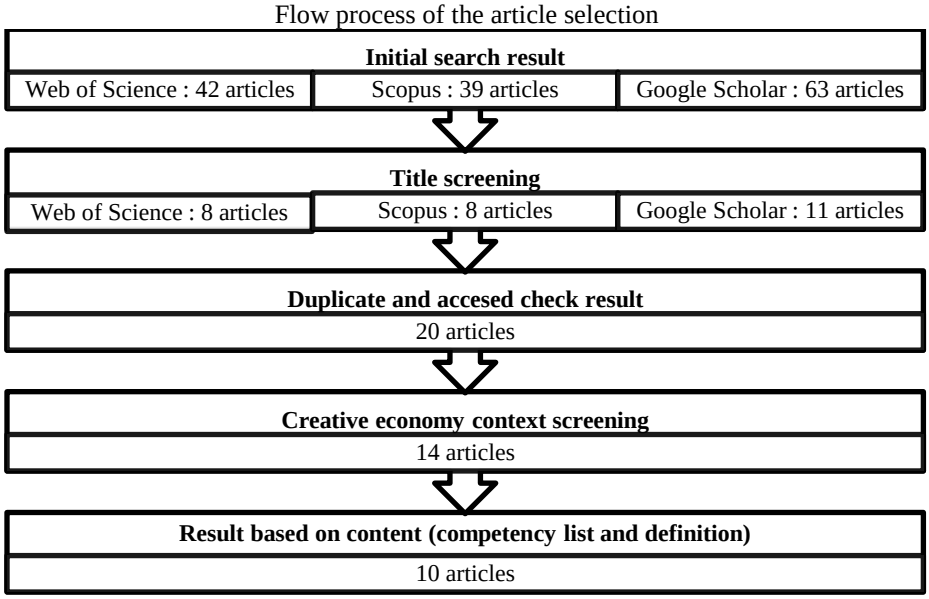
The results of this analysis were subsequently used as the basis for compiling the proposed competency model for creative human resources on an SME scale. Next is to conduct a preliminary study to confirm the relevance of competency elements with the actual context through interviews with two samples of creative economic SMEs in the city of Bandung. The preliminary study aims to ensure that the proposed competency elements are valid and needed by the object of research in actual conditions (Wickramasinghe and De Zoyza, 2009). The selection of two case studies is because it can represent a sample of SMEs in the creative economic sector in Bandung, which has been widely known and stands for more than 10 years. The sample selection criteria based on brand recognition were used in the study of Azis et al. (2014) and year of establishment were used in the Main and Ratnapuri study (2018). However, the preliminary study was only conducted on two samples of SMEs due to time constraints and data accessibility. While for the number of informants involved in each interviews based on key informants in the company.

The city of Bandung was chosen as the location of the object of research because the city is known as one of the creative cities (United Nations Educational, Scientific and Cultural Organization, 2018) and became the center of creative economic development in Indonesia (Maryunani and Mirzanti, 2014). The selection of the city of Bandung as the location of the center for creative economic development in Indonesia based on several things, such as the center of the creative community is developing (Maryunani and Mirzanti, 2014), the number of higher education institutions in the field of famous technology and arts, such as Bandung Institute of Technology (ITB), Padjadjaran University (UNPAD), etc. (Aritenang, 2012 ; Maryunani and Mirzanti, 2014; Prayudi et al., 2017), proximity to the capital city of Jakarta (Aritenang, 2012), the most significant number of e-commerce users, the highest number of creative economy exports (Central Bureau of Statistics, 2017).

IV. RESULTS AND DISCUSSIONS

A search of the three databases (i.e., Web of Science, Scopus and Google Scholar) resulted in 42 articles, 39 articles and 63 articles, respectively. Upon screening the results for relevant article titles, only 8 articles from WoS, 8 articles from Scopus and 11 articles from Google Scholar remained. After further analysis, it was discovered that five articles had the same title and that two articles were reduced because they were not obtained. Six more articles were eliminated because they do not concern the relevant context, and upon further screening, four more articles were removed because they do not contain the necessary list of competencies. Thus, the database search resulted in 10 articles that meet the given criteria. The article selection process is presented in Figure 1.

Figure 1
Flow process of the article selection



The search found 10 articles that discuss the competency model within the creative industry. Each of the 10 articles was evaluated based on the criteria described in the methodology section. From the evaluation, it can be seen that the majority of the literature employs a psychological approach (6 of 10) in developing a competency model within the creative industry. However, the other approaches, the educational approach (Oakley, 2008, Bridgstock, 2011; Trisno and Sary, 2011) and the organizational approach (Kamprath and Mietzner, 2015), were also used. The majority of the evaluated research utilised empirical studies (8 out of 10) to identify a list of competency requirements for each of the research objects. In the empirical study conducted, five studies used objects within the creative economy's business sector, such as culinary (Hu, 2010; Muizu and Hilmiana, 2016), bamboo crafts (Lee et al., 2010), software (Aisha et al., 2016) and various businesses (Mietzner and Kamprath, 2013; Kamprath and Mietzner, 2015). Other empirical research, however, focused on in higher education and concerned student objects (Trisno and Sary, 2011), graduates (Bridgstock, 2011) and professors and academic staff in the art department (Li and Sun, 2016). The majority of the competency models are specific to one position (6 of 10). The other studies are more general, concerning professional workers (Mietzner and Kamprath, 2013; Kamprath and Mietzner, 2015), creative professionals majoring in the arts (Li and Sun, 2016) and professionals in the culinary sector (Hu, 2010). Furthermore, the majority of the competency models found in previous studies did not align with organizational strategy, because the competency models were developed using the psychological and educational approaches, which focus on the job context. The results of the evaluation are displayed in Table 2.

Table 2
Research of competency model in creative economy context

Res ID	Researcher	Competency Approach	Type of Research	Organizational Settings	Targeted Individu	Competency Type*	Competencies Category
1	**Oakley (2008)**	Educational Approach	Conceptual / Review	Non Business - Higher education	Creative workforce from undergraduate	Type 1	Entrepreneurial Creative economy context
2	**Hu (2010)**	Psychological Approach	Empirical	Business - Culinary business	Professional worker in culinary	Type 2	Entrepreneurial Managerial Creative economy context
3	**Lee et al. (2010)**	Psychological Approach	Empirical	Business - Bamboo business	Handicraftsmen	Type 1	Creative economy context
4	**Bridgstock (2011)**	Educational Approach	Empirical	Non Business - Universities	Graduates	Type 1	Entrepreneurial Managerial
5	**Trisno & Sary (2011)**	Educational Approach	Empirical	Non Business - Vocational degree	Vocational students	Type 1	Entrepreneurial Managerial Creative economy context
6	**Mietzner & Kamprath (2013)**	Psychological Approach	Empirical	Business - Company	Profesional workers	Type 2	Entrepreneurial Managerial Creative economy context
7	**Kamprath & Mietzner (2015)**	Organizational Approach	Conceptual / Review	Business - Company	Profesional workers	Type 2	Entrepreneurial Managerial Creative economy context
8	**Aisha et al. (2016)**	Psychological Approach	Empirical	Business - SMEs	Software entrepreneur	Type 1	Entrepreneurial Managerial Creative economy context
9	**Li & Sun (2016)**	Psychological Approach	Empirical	Non Business - Universities	Cultural and creative professional in universities	Type 2	Entrepreneurial Managerial
10	**Muizu & Hilmiana (2016)**	Psychological Approach	Empirical	Business - SMEs	Culinary entrepreneur	Type 1	Entrepreneurial Managerial

* Type 1 = single-job competency model; Type 2 = "one-size-fits-all" competency model

Oakley (2008) has identified the outcomes that need to be gained through an education in the arts to establish a creative workforce in Australia. These outcomes include: academic knowledge, increased creativity, the formation of certain attitudes and skills (such as confidence and social acumen) and the ability to self-teach. Moreover, in the digital era it is also important to be digitally literate. Such skills can be established through formal and non-formal education. This list of competencies was obtained through the study, so that in the evaluation Table 1 is grouped as conceptual with the approach used is the educational approach.

The educational approach, employed in the Bridgstock (2011) study, was used to identify necessary career-related skills for graduates in the creative industry sector. The 11 found competencies were divided into two groups, namely self-management and career building. The self-management group deals with the ability to manage an internal career, i.e., building and maintaining a positive self-image, changing and growing throughout life, participating in lifelong learning and maintaining a work-life balance. The career building group, on the other hand, refers to managing external career factors, including finding and obtaining work, locating and using career information and making career enhancing decisions.

Trisno and Sary (2011) have identified the competency needs for vocational education in creative industries: communication skills (including negotiation skills, language, creative thinking, decision making, problem solving, self-awareness, empathy and interpersonal relationships) as well as technological skills (IT skills). The study focused on governmental research and development institutions and vocational institutions (three vocational schools and four vocational higher education institutions) in Bandung, West Java. The resulting list of competencies can be used to curate a creative-industry-focused curriculum.

Several studies were conducted in specific creative sub-sectors of the creative industry, such as culinary (Hu, 2010; Muizu and Hilmiana, 2016), bamboo crafts (Lee et al., 2010) and software (Aisha et al., 2016). In studies conducted on specific sectors, the developed competency models include the specific skills required for each sector. For example, Lee et al. (2010) have identified the competencies required for bamboo craftsmen in Taiwan. In the proposed competency model, there are three competency groups: cultural understanding, international trends understanding and technical skills of handicraft making. This list of competencies was obtained from Delphi, involving 10 experts. The craft competency model includes the soft and hard competencies required for bamboo craftsmen.

Hu (2010) has researched the culinary field to identify competencies within the culinary industry using the Delphi approach. H found seven dimensions of competency: creativity competency, aesthetic competency, cultural competency, product competency, management competency, service competency and technological competency. Each competency dimension consists of four to five critical elements, found using the ANP method. Muizu and Hilmiana (2016) identified the competency profile of entrepreneurs within the culinary field in Bandung. The study involved 50 SME entrepreneurs. Competency was measured from the following five dimensions related to entrepreneurial competencies: opportunity competencies, organising competencies, commitment competencies, strategic competencies, and conceptual competencies. The results indicate that three dimensions of competency need to be developed by culinary entrepreneurs: organising competencies, strategic competencies and conceptual competencies.

Research on an entrepreneur's competency within the creative industry sector was also conducted by Aisha et al. (2016) on software entrepreneurs. The proposed competency model includes both soft and hard competencies, similar to that proposed by Lee et al. (2010), in accordance with the context of the software business. Three competency groups were used: entrepreneurial competencies (ability to recognise opportunities, environmental conditions and formulate strategies according to organisational conditions), managerial competencies (ability to plan, manage and direct resources in the organisation) and industrial context competencies (related to one's technical knowledge of the industry as well as the ability to use specific tools, procedures and methods). The three competency groups comprise 17 competency elements. These competencies were grouped based on the role that entrepreneurs undertake for the early stages of business establishment (Aisha et al., 2016).

In addition to research conducted on a specific competency model, research conducted on the more generic, "one-size-fits-all" competency model was also studied. This model was employed in studies conducted by Mietzner and Kamprath (2013), Kamprath and Mietzner (2015) and Li and Sun (2016). Mietzner and Kamprath (2013) and Kamprath and Mietzner (2015) developed a competency model for professional workers in the creative industries. However, these two studies use different approaches. In the Mietzner and Kamprath study (2013), a psychological approach is used to identify the competencies required by professional workers. Competency identification was conducted qualitatively by involving 17 experts in the creative industries of various sectors. The proposed competency model consists of three dimensions of competency: the personal-social (related to soft skills for self-management and relationships), the methodological (the ability to analyse and solve problems) and the professional (specific skills or areas of expertise).

Kamprath and Meitzner (2015) employed an organisational approach, in which a list of competencies is identified based on the organisation's needs. In a competitive and dynamic environment, resource management that aligns with the organisation's needs is key. The competencies of the workers can determine the organisation's strategy. The proposed competency model consists of three groups: professional competencies (those required to fulfil specific tasks in related industries), methodological competencies (the ability to learn and use various methods) and personal-social competencies (the ability to communicate and cooperate to meet the needs of the group). In the model, professional competencies are those that concern the creativity, managerial ability and technological knowledge required within the creative industry. The proposed competency model was developed from the literature review on competency within the creative industry sector, and was adapted to the organisation's dynamic capabilities.

Li and Sun (2016) have developed a competency model for creative professionals within a university setting, comprising of professors and academic support staff in the Humanities. The research was conducted empirically using the behavioural event interview method and a quantitative survey. The results indicate six dimensions of competency: system ability (the planning and management system in the organisation), strategic abilities (the organisation's short- and long-term plans and objectives), learning ability (related to the learning process atmosphere) resource integration (including resource management processes in the organisation), creative management (the ability to transform ideas into products) and service consciousness (the technical skills required in academic teaching).

Since the objective of the study is to design a competency model for creative industry managers and workers at the SME level, the acquired list of competencies must be appropriate within the SME context. As discussed in the methodology section, a list of competencies obtained from the previous literature is then compared with references to identifying relevant competency elements. If there are similarities in the use of keywords it will be used in the proposed competency model. For example in the research of Mietzner and Kamprath (2013), one of the competency elements used is "ability to work in a team", in the generic competency model of Spencer and Spencer (1993) it similar with "Teamwork and cooperation", so the competency element "teamwork" is used in the proposed research. The results of the analysis between competencies used in each previous study are presented in Table 3.

In dynamic environmental situations, model competencies should be developed using an organisational approach. It is intended that the proposed competency model can support the strategy and achievement of organisational goals (Dai and Liang, 2012). According to Kates and Galbraith (2007), different organisational strategies require different organisational designs. Indeed, strategy is a set of capabilities that need to be managed well within the organisation to achieve strategic goals. Thus, strategy is key to an organisation's success.

Kates and Galbraith (2007) have proposed the Star Model, which can be used to design the organisation. In order to achieve organisational strategies, an organisation needs to identify the capabilities that differentiate it from others. From these capabilities, the organisation needs to identify key roles (structure) and skill sets for each role (people). Improved alignment between capabilities, structure and people reinforce the desired actions and behaviours, which in turn, improve an organisation's ability to achieve its goals.

According to Mintzberg (1980), within the organisation there are at least five basic roles: operating core, strategic apex, middle line, technostructure and staff support. The operating core and supporting staff comprise employees within an organisation that perform operational functions, both with regard to production and other supporting functions. The middle line deals with managerial positions that bridge the strategic level as well as the operational level. The technostructure concerns the support required to adapt to environmental conditions. Finally, at the top is the strategic apex, which composes and determines the direction and strategy of the organisation. Within the context of SMEs, these five roles are also necessary, but in a simpler fashion. According to Ahmad et al. (2010), in SMEs there are three important roles that are needed to run and maintain business; these are the entrepreneurial role, the managerial role and the technical role. The entrepreneurial role performs activities related to the organisation's vision, mission and strategy; explores customer needs; identifies opportunities and recognises environmental conditions. This role is in line with the strategic apex from Mintzberg (1980). The managerial role is concerned with management scope and management activities including planning, organising, directing and controlling. Similarly, the technical role relates to technical activities and the use of specific methods within the organisation. Technical roles are highly adapted to the context of the industrial environment in which the organisation is located (Aisha et al., 2016). Thus, it can be seen that each role requires different competencies.

Table 3
Competency identification from previous studies

Competency	Reference Competency Model Spencer and Spencer (1993)	Research ID 1	2	3	4	5	6	7	8	9	10
Achievement Orientation	Achievement orientation	v	v		v	v	v	v	v	v	
Initiative	Initiative						v			v	v
Self Confidence	Self-confidence	v			v	v	v	v	v		
Flexibility	Flexibility						v	v			
Commitment	Organizational commitment						v		v		v
Conceptual thinking	Conceptual thinking		v				v				v
Analytical thinking	Analytical thinking		v			v	v	v		v	
Relationship Building	Relationship building	v	v			v	v	v		v	
Customer Service Orientation	Customer service orientation		v						v		
Interpersonal Understanding	Interpersonal understanding					v	v				
Leadership	Team leadership							v	v		
Teamwork	Teamwork and cooperation						v	v	v		
Decision Making					v	v	v				
Problem solving			v			v			v		
Seeking Opportunities							v				v
Learning Orientation		v			v		v		v		
Innovation Management			v				v	v		v	
Business functional							v		v	v	
Project Management							v	v	v		
Knowledge Management								v		v	
Change Management			v		v		v				
Aesthetics			v	v							
Cultural impact			v	v			v	v		v	
Language						v		v			
Product knowledge						v			v		
Cross sector knowledge							v				
Intellectual property							v	v			
Technology		v	v			v	v		v		

Therefore, this study proposes using the following three categories of competency: entrepreneurial, managerial and creative economy. The importance of industry-specific competencies has also been emphasized by Mietzner and Kamprath (2013) and Kamprath and Mietzner (2015). Based on the need for roles in SMEs, the proposed competency model for managers and workers in the creative industry sector is presented in Figure 2.

Figure 2
Diagram of proposed competency model

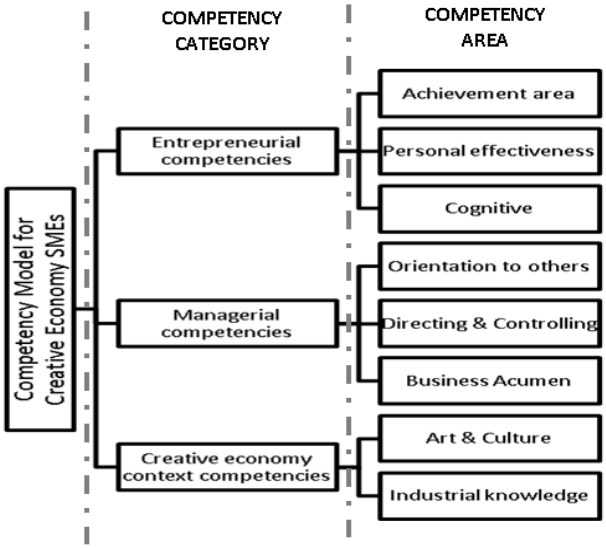


Figure 2 shows the proposed competency model for creative economy SMEs in the form of diagrams. The proposed competency model consists of three levels of competency depth, as used in Hurd and McLean (2004). The first level consists of three categories of competencies that are more general in context, i.e. entrepreneurial competencies, managerial competencies and creative economy competencies. At the second level, each category concerns 2-3 competency areas. A competency is more specific than a competency category. The third level consists of more specific competency elements within each competency area. In total, there are 28 competency elements in three competency categories. Details of competency elements and proposed definitions in the competency models of creative economy SMEs can be seen in Table 4.

The entrepreneurial competencies category deals with the ability to develop and define strategies and to transform opportunities and ideas into innovation (Ahmad et al., 2010; Aisha et al., 2016). This category consists of three competency areas: namely, achievement, personal effectiveness and cognitive. The competency area of achievement is defined as the ability to perform or act beyond predetermined targets and collect and filter received information (Spencer and Spencer, 1993). Spencer and Spencer (1993) have also defined personal effectiveness as the maturity of individuals in the face of others to manage work and overcome pressures and difficulties presented within the environment. The cognitive competency area includes the ability to understand situations, tasks, problems and opportunities (Spencer and Spencer, 1993).

Table 4
Detail of proposed competency model for creative economy SMEs

Competency category (Definition)	Competency area (Definition)	Competency element	Competency element definition
Entrepreneurial competencies (ability to develop and define strategies and to transform opportunities and ideas into innovation)	Achievement (The ability to achieve and act beyond the target set)	Achievement Orientation	The ability to work correctly or to compete beyond good standards (past individual performance, objective measurement, other people's performance, self-purpose)
		Initiative	The ability to take action beyond what is needed / expected by a position, doing something that is not asked by others who can improve and improve work and avoid problems, or find and create new opportunities
		Seeking Opportunities	The ability to gather information relating to the search for new opportunities to support work.
	Personal effectiveness (The ability relate to aspects of individual maturity when dealing with other people, work, and the pressures and difficulties provided by the environment)	Self Confidence	The ability to express yourself in a precarious situation
		Learning Orientation	The ability to actively learn and develop competitiveness.
		Commitment	Shows responsible behavior in a consistent manner to fulfill the beliefs and expectations of others, and fulfill the applicable rules
		Flexibility	The ability to adjust and work effectively in different situations or groups
	Cognitive (The ability to understand situations, tasks, problems, opportunities, or knowledge as a whole)	Conceptual thinking	The ability to understand situations or problems by looking at them as a whole (integrated) or the ability to identify key or fundamental problems in complex situations
		Analytical thinking	The ability to understand the situation by breaking it down into more detailed parts (factors).
		Problem solving	The ability to identify important parts of work, their relationships, estimated completion and control of solutions
Managerial competencies (ability to manage the routine operational management)	Orientation to Others (The ability to understand the concerns, interests, and needs of others, and try to meet the needs of others)	Relationship Building	The ability to connect the various roles involved include users, businesses, and technology professionals
		Customer Service Orientation	The ability to understand the needs of others, and to serve others to meet their needs
		Interpersonal Understanding	The ability to open up to listen to what other people say and listen to various ways of view without bias
	Directing & Controlling (The ability to develop others, lead others, and increase teamwork)	Decision Making	The ability to determine actions after developing various alternative actions based on facts and logical assumptions
		Leadership	The ability to take on the role of leader in order to lead others
		Teamwork	The ability to work cooperatively with others, be part of a team, work together.

Competency category (Definition)	Competency area (Definition)	Competency element	Competency element definition
	Business Acumen (The ability to carry out activities related to running a business)	Innovation Management	The ability to produce innovation and creative solutions using creativity to introduce new ideas, processes and products.
		Business functional	The ability and knowledge about basic business principles, economic trends and conditions
		Project Management	The ability to plan, manage, and implement a project effectively and efficiently to achieve goals by considering time and cost.
		Knowledge Management	Ability to manage sources of knowledge and information exchange within organizations.
		Change Management	The ability to accept and support initiatives for changes that have been made or are intended to be carried out by the company including helping other organizational members understand the meaning of change and supporting and maintaining enthusiasm and commitment to the change process
Creative economy context competencies (the knowledge and skills required within specific sectors of creative economy)	Art & Culture (The ability to understand culture and art in the spread of innovation)	Aesthetics	The ability to be sensitive to things that have a beauty value in terms of form, content, or meaning contained in them.
		Cultural impact	The ability to understand local culture so that it can make the appropriate product or service
		Language	The ability to use foreign languages well that can be understood by others
	Industrial knowledge (Knowledge needed to complete tasks, jobs, or businesses in industry)	Product knowledge	Knowledge about how to design a product starting from the composition to the process of making the product.
		Cross sector knowledge	The ability to understand expertise from other sectors in the context of business development
		Intellectual property	Knowledge of certain legal principles such as intellectual property rights and copyright
		Technology	The ability to know technological developments and the ability to use new technology in order to increase productivity and minimize costs

The second category, managerial competencies, includes the routine operational management skills (Aisha et al., 2016). There are three competency areas in this category as well; these are: orientation to others, direction and control and business acumen. Orientation to others relates to the ability to understand and meet the needs of others and establish relationships or networks to achieve goals (Spencer and Spencer, 1993). Direction and control is defined as the ability to direct, control, make decisions and improve teamwork (Spencer and Spencer, 1993). Business acumen is the ability to manage resources fairly and responsibly and manage processes to achieve organisational goals (Hurd and McLean, 2004).

The third category concerns creative economy competencies. These competencies are defined as the knowledge and skills required within specific sectors of creative economy (Mietzner and Kamprath, 2013; Kamprath and Mietzner, 2015). There are two competency areas included in this category: art and culture and industrial knowledge. The art and culture competency is the ability to understanding and admire art and culture (Hu, 2010). Industry knowledge, on the other hand, consists of specific knowledge related to an organisation's needs within the creative industry (Trisno and Sary, 2011). The proposed competency model is also deemed necessary in line with dynamic technological developments. In the context of the creative economy, technology becomes commonplace and ubiquitous that can generate new creativity, forms of expression of modern art, new business models (relating to digital markets places, consumer groups, and distribution channels), new collaboration models, and the creation of a community of creators and innovators virtually. The existence of the internet has revolutionized the way of distribution and information exchange and collaboration so that it can be done virtually and globally. In line with the industrial development leading to 4.0 industrial revolution, several emerging technologies that can have an impact on creative economic development include cloud computing, IoT (Internet of Things), 5G, big data analytics (Abbasi, Vassilopoluo , and Stergioulas, 2017).

The existence of technology opens opportunities for the development of innovations and creativity. Disruptive technologies that occur have an impact on future changes in the workforce, such as different job profiles and different competency needs. Different job profiles are a challenge to manage the recruitment, training, and talent management process (Bach, 2017). In connection with these technological changes, several competencies need to be possessed by the workforce in the future, such as social intelligence, transdisciplinarity, cross-cultural competency, new media literacy, and collaboration (Bach, 2017). These competency needs have been accommodated in the proposal competency model, which is essential for creative economic workforce (both managers and workers) to have several competencies specific to the creative economy, namely language skills (accommodating global collaboration), cross-sector knowledge (cross-sectoral understanding), technology (knowledge and understanding of the latest technology), cultural understanding (understanding of culture), and product knowledge (understanding of products produced). To ensure the proposed competency model is relevant with the needs in the real situation, the preliminary study to confirm the proposed competency model, is made to management in two samples of creative economy SMEs, as shown in Table 5.

Table 5
Results of preliminary study with two samples of SME

Competency category	Competency area	Competency element	SME 1*	SME 2*
Entrepreneurial competencies	Achievement	Achievement Orientation	AD	AD
		Initiative	ND	AD
		Seeking Opportunities	AD	AD
	Personal effectiveness	Self Confidence	AD	AD
		Learning Orientation	AD	AD
		Flexibility	ND	AD
		Commitment	AD	AD
	Cognitive	Conceptual thinking	AD	AD
		Analytical thinking	AD	AD
		Problem solving	AD	AD
Managerial competencies	Orientation to Others	Relationship Building	AD	AD
		Customer Service Orientation	ND	AD
		Interpersonal Understanding	ND	AD
	Directing and Controlling	Decision Making	AD	AD
		Leadership	OM	AD
		Teamwork	AD	AD
	Business Acumen	Innovation Management	OM	AD
		Business functional	OM	AD
		Project Management	ND	AD
		Knowledge Management	OM	AD
		Change Management	OM	AD
Creative economy context competencies	Art and Culture	Aesthetics	ND	ND
		Cultural impact	ND	ND
		Language	AD	AD
	Industrial knowledge	Product knowledge	ND	AD
		Cross sector knowledge	ND	ND
		Intellectual property	ND	ND
		Technology	ND	AD

* AD = needed by all divisions; ND = needed by several divisions; OM = needed by management level only

The results of interviews for preliminary study in the field revealed that there are some elements of competency that do not need to be possessed by all creative economic workers, such as leadership, business functional, knowledge management, and change management that only need to be owned by the management level. These findings indicate that there are differences in the competency elements required for the position of managers and workers. In the study of Sudirman et al. (2018), there are significant differences between the level of importance of competence for managers and workers in the nine competency elements, namely achievement orientation, concern for order, information seeking, analytical thinking, relationship building, developing others, team leadership, teamwork, and sense of humor. The profile of entrepreneurs in the creative economy sector tends to be dominated by individuals who start a business by pursuing certain hobbies, then decide to commercialize it (Barcelona Activa, 2011; Aisha et al., 2016). Entrepreneurs have qualified technical skills, but have a lack of managerial skills, so that for successful leaders in creative businesses need to develop managerial skills and renew knowledge of their creative economy sector (Barcelona Activa, 2011). These

findings indicate that managerial competencies and creative economy competencies are more important for managers so the competencies development can direct towards strengthening the competency elements in this competency group.

The proposed model of competency of the creative economy SMEs is expected to be a guide for business actors and the government in developing the competence of creative economy HR. For businesses, the need for competency elements needed for management positions can be used to create career paths. This need can fulfill by providing training to workers who have the potential to enter managerial positions. As for the government, the elements of competence needed by creative economy workers, in general, can be a reference for providing related training to increase the capacity and quality of creative human resources.

Research conducted still has limitations in terms of the competency model validation developed. According to Spencer and Spencer (1993) to validate competency models can be done by collecting Behavioral Event Interview data from samples that meet superior and average performance criteria or do competency ranking determination from samples with superior and average performance. Both of these methods are focused on validating competency models in single jobs. Another approach that can be done to validate competency models is to use quantitative methods to test the relationship between competency and performance produced. This empirical approach can be done by involving a large number of samples, according to the research variables (Suhairom et al., 2014). Further research can be directed to conduct an empirical survey on SMEs human resources to validate the proposed competency model.

V. CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the literature study and preliminary study, it can be seen that there are 28 competency elements for managers and workers within the creative economy sector across three competency categories. The proposed competency model consists of three levels and covers competency categories, competency areas and competency elements.

From the literature review, several previous studies have proposed a competency model for various jobs within the creative industry sector. Two of the evaluated studies employed a more generic competency model for professional workers, regardless of specific work. However, such a competency model does not consider the needs and characteristics of the organization, especially within the context of SMEs. Thus, the research regarding the use of competency models within the creative industry can be used to explain the correlation between organizational strategy and the proposed competency model.

As a continuation of the proposed model, it is necessary to develop a questionnaire based on the operationalization of the variables in order to empirically validate the competency model. The questionnaire should be distributed to managers and workers at creative economy SMEs. The questionnaire contains several questions and should be answered by the owners, managers and workers in creative economy SMEs, especially within the fashion and software sectors. Subsequently, a factor analysis should be run to validate the model and ensure that the competencies are grouped correctly. Furthermore, there are opportunities to identify the differentiating competencies between management and staff empirically, as well as to map the competencies across the organization to

ensure that the competency model aligns with the outlined organizational strategy.

The initial findings based on preliminary study indicate that managerial competencies and creative economy competencies are more important for managers so the competencies development can direct towards strengthening the competency elements in this competency group. The proposed competency model can be used in academic institutions (such as vocational education and higher education institutions) within the scope of the creative economy sector, as a foundation for preparing graduates in accordance with industry needs. Specifically, cultural and linguistic, as well as technological and digital literacy skills need to be inserted into the curriculum, because these competencies relate to those sought after within the creative economy. Meanwhile, several competencies related to cognitive ability and achievement orientation can be studied refers to the learning content according to the existing curriculum that has been prepared. Soft competencies can be developed through project-based learning methods that use cases from within the creative economy sector to improve teamwork ability, leadership, decision making, interpersonal understanding and project management.

The proposed competency model can also be used by entrepreneurs and government as a reference to develop and empower the capability of managers and workers in creative economy SMEs. For businesses, the need for competency elements needed for management positions can be used to create career paths. This need can fulfill by providing training to workers who have the potential to enter managerial positions. As for the government, the elements of competence needed by creative economy workers, in general, can be a reference for providing related training to increase the capacity and quality of creative human resources.

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