EXPLORING THE RELATIONSHIP BETWEEN WORKER’S ADAPTIVE PERFORMANCE AND CO-CREATION PROCESS IN INDONESIA’S CREATIVE INDUSTRY

Widya NANDINI¹, Aurik GUSTOMO², Dedy SUSHANDOYO³

¹,²,³School of Business and Management, Institut Teknologi Bandung

Abstract

Today, a new market perspective has emerged that changes the former view through the concept of co-creation. However, the explanation regarding this interaction is still limited. Therefore, this research attempts to examine the interaction between the company and the market thoroughly based on the customers' co-creation process in Indonesia’s media and application development companies. To achieve those research objectives, we conducted a preliminary study through semi-structured interviews. This study found that the tinkering co-creation process exists in these two sectors of the creative industry. This preliminary study also found that workers' adaptive performance is pivotal toward the co-creation process between the company and the customer. Therefore, it demands adaptive workers to have a better approach to product development with their clients. Thus, it is showed that co-creation processes are one of the keys to developing a sustainable competitive advantage for companies.

Keywords: Adaptive Performance, Creative Industry, Co-creation, Product Development, Emerging Market

JEL classification: O31, M12, M50

¹ Ph.D. Student, School of Business and Management, Institut Teknologi Bandung, e-mail: widya-nandini@sbm-itb.ac.id
² Professor, School of Business and Management, Institut Teknologi Bandung, e-mail: aurik@sbm-itb.ac.id
³ Assistant Professor, School of Business and Management, Institut Teknologi Bandung, e-mail: dedy.sushandoyo@sbm-itb.ac.id
1. Introduction

Based on the traditional economic thought, the relationship between the company and the customer tends to be passive, which can greatly trigger information asymmetry between the two (von Hippel, 2005). In the recent decade, a new product development concept has emerged to challenge this by involving the customer more actively. This concept is known as customer co-creation. This understanding emerged based on the underlying premise of marketing’s new service-dominant logic.

Customer co-creation is most evident in the creative industry, where leading companies have produced countless innovations based on the collaboration between the customer and the company. Xie, Guan & Huan (2019) emphasized that the interaction between customers and employees requires effort and an adjustment process that is beneficial to both parties in the co-creation process. Therefore, to understand the co-creation process's dynamics in detail, it is necessary to investigate the relationship between the employee and the customer. Also, Sushandoyo & Magnusson (2012) argued that technology could affect individual components or subsystems or the interfaces between them. Thus, companies' employee plays an essential role in the production process, which involves technological advancement. The media industry and application developers are known as one of the industries that have been massively impacted by technology advancement.

This research will use case studies from the creative industry, specifically from the media sector and a software app development company. As we know, the creative industry has an infinite variety of creative products (Richard Caves, 2000), and technology advancement has further directed them to be more innovative. The creative industry has evolved from the value creation of innovation (Berg & Hassink, 2014). Richard Caves (2000) explained that creative industries’ unique characteristic is the uncertain demand for the product; it has an almost infinite variety of creative products. Thus, this industry has the opportunity to create an unlimited number of product innovations through technology and collaboration between parties. It is showed that these two sectors are gain a greater collaboration in the co-creation process because of the technological advancement in recent years. The selection of these two sectors aims to explore the latest collaboration processes with the impact of technology that tends to be massive.

Related to this, Xie, Guan & Huan (2010) also emphasize that the co-creation process requires the employees' high adaptability from the customers'
dynamic demand. Also, workers are seen as active facilitators of the customer co-creation process. In this regard, Putranto, Nuraeni, Gustomo, and Ghazali (2018) emphasize that an individual's ability to manage himself and his emotions has a significant effect on performance and achievement. So, the worker's attitude, behavior, and decision-making will determine success in the co-creation process. Thus, the co-creation process with customers aims to achieve a level of product satisfaction with more diverse innovations but requires higher effort and job resources.

Through the customer co-creation concept, customers have a more active interaction in generating the idea to produce more innovative products (Prahalad & Ramaswami, 2004). This process also allows customers or users to provide more accurate information and knowledge to providers or companies. However, the current research focuses on the customer perspective without paying attention to the dynamics between employees inside the company and suppliers (Boadi et al., 2020). Moreover, Chathoth et al. (2013) suggest future research to see how human resource management's perspective on the co-creation process. It is emphasized that the managing point of view of the human capital in the co-creation process remains limited. Therefore, this study explores the dynamic interaction between workers with the customer to explore the process of customer co-creation.

2. Literature Review

2.1 Technology Innovation and the Creative Industry

Nowadays, the creative industry is one of the economic pillars of several countries. The development of the creative industry is accelerated with technology advancement. Moreover, information and technology development provides space for collaboration and exchange of information between companies and the market (Bernik et al., 2015). The creative industry evolved from the value creation of innovation (Berg & Hassink, 2014). Richard Caves (2000) explained that creative industries’ character is the uncertainty demand for the product; it has an almost infinite variety of creative products. Thus, this industry has the opportunity to create unlimited product innovations through technology and collaboration between parties.

Mitchell et al. (2003) explained that the industry’s creative process domain comes from a combination of scientific creativity, economic creativity, technological creativity, and cultural creativity. Analysis from Mitchell et al. (2003) argued that information technology became a pivotal
point in the creative industry’s innovation process. In particular, the media industry has experienced a drastic change in consumption patterns from print to digital. Jenkins (2006) explained that this affects journalism itself, starting from the integrated production process and the emergence of countless multi-platform products. Bowman and Willis (2003) explained that this information technology’s existence leads to the concept of convergent journalism. Convergent journalism is the increased cooperation and collaboration of various production media and participatory journalism (Deuze, 2004). This phenomenon shows a collaboration between specialists in media companies that could lead to an infinite number of multi-platform products. Also, this shows the dynamic interaction between media companies and customers.

On the other hand, Mitchell et al. (2003) explained that the practice of making designs and forms from the software is a creative process that involves commercial or business practitioners, designers, and IT experts. Existing platforms in software and application companies lead to business-to-business service ecosystems (Hein et al., 2017). The collaboration process is tied between the organization to the organization and the end-users of the application or software. It is emphasized that the application and software industry is a provider of products with creative processes and collaboration between several specialists and the customers. Besides, it also reinforces the importance of interaction and collaboration between companies and customers to ensure product success.

### 2.2 The Customer Co-Creation

The term co-creation comes from the new product development process. The traditional economic paradigm tends to view the new product development process as firm-centered, and the customer’s role tends to be passive (O’ hern & Rindfleisch, 2010). So at this time, a paradigm appears that customers have more control over new product development activities (Seybold, 2006). Moreover, developments in information systems, economics, management, and marketing have directed the new product development process to the concept of co-creation (Prahalad & Ramaswami, 2004). Based on the analysis from O’ hern & Rindfleisch (2010), there are four types of customer co-creation processes. The first is collaborative co-creation. It is defined as a process in which customers have the power to collectively develop and improve a new product’s core components and underlying structure (i.e., source code). Second, the tinkering process is known as the
process in which customers make modifications to a commercially available product, and some of these modifications are incorporated into subsequent product releases. Third, the customer co-creation process in which a relatively small customer group provides a firm with most of its new product content or designs. In contrast, a larger group of customers select which firms should adopt content or designs. This is known as co-designing. Lastly, it describes the process in which customers directly communicate ideas for new product offerings to a firm (e.g., focus groups, satisfaction surveys, tracking studies).

The co-creation approach also allows the organization to have flexibility in new product development. It drives the locus of innovation from the outside organization and drives companies to build their sustainable competitive advantage (Wang et al., 2015). Not only that, but co-creation also reduced information ambiguity from the market’s needs and shorter the error learning loop in the product development process (Von Hippel, 2005).

Therefore, the co-creation process needs a strategic approach to exploit and explore the resources and capabilities (March, 1991). Therefore, this mechanism is derived from accumulative resources. It involved organizational resources and human capital resources such as worker’s skills, attitudes, behavior, knowledge, and others (Holzweber et al., 2012).

The urgency of adaptive performance from an organizational perspective is the importance of dynamic capabilities. Dynamic capabilities are known as a firm’s response toward the dynamic market to continually explore and integrate their resources and capabilities (Wang & Ahmed, 2007). Hence, the market change drove organizations to the higher learning process to build a new competitive advantage (Wójcik, 2015). Based on the organization’s dynamic capabilities, the companies urge the companies to exploit their external resources through collaboration with the external resources. One approach that maximizes organizational external’s resources is co-creation. Moreover in today’s market environment also lead organizational resources into VRIO conditions. VRIO is defined by the state of the company’s resources that tend to be valuable, rare, imperfectly mobile, and organizationally exploitable (Barney et al., 2012). It also demanded the organization too had an active collaboration with the external parties.

The co-creation process can reduce inaccurate information on customer needs and solve problems that customers need. Consequently, workers’ skills, attitudes, and decision-making during the collaboration process with the customer become pivotal in the co-creation process. In detail,
the organization needs to create dynamic capabilities from human capital perspectives. The co-creation process had a complex process that involved a long-term relationship between employees and customers or clients (Håkansson & Johanson, 1993). Usually, companies used marketing employees to maintain the knowledge combination between employees and clients (Richey Jr et al., 2008). It also involved a dynamic demand that urges higher adaptive performance from the workers.

As we can see, the co-creation process involves workers as active facilitators. Moreover, in this process, employees must be able to assess information important to the company actively. The ability to generate ideas comes from a different perspective (Gustafsson et al., 2012). It is emphasized that workers must obtain the skills that easily adapt to dynamic work situations. The customer co-creation process is also one of the resources for companies to build sustainable competitive advantage through a collaborative process of ideas in a product development process that suits market needs without information asymmetry.

### 2.3 Individual Adaptive Performance: Definition and Context

The concept of individual adaptive performance helps companies in the creative industry maintain and answer disruptive innovation challenges. Individual adaptive performance is defined as an individual’s ability to adapt to dynamic work situations (Neal & Hesketh, 1999). Scholars have argued that this classification of performance behaviors reflects a static view of performance and have called for a focus on behaviors that reflect the extent to which individuals are responsive to changes in task requirements and in their work environments (Allworth & Hesketh, 1999; Campbell, 1999; M. Griffin, Neal, & Parker, 2007; Neal & Hesketh, 1999).

The measurement’s dimensions are reactivity to emergencies, handling work stress, creativity, learning effort, and interpersonal adaptability (Charbonnier-Voirin & Roussel, 2012). This concept is also applicable to other types of industries due to today’s dynamic business environment. This research will explore the individual adaptive performance from the creative industry perspective to gain important insight into an individual’s adaptive mechanism, learning, and innovation process in an organization.

On the other hand, the creative product is derived from social agents’ combination, and their strategies and tactics using all the capitals available to constitute the valuable creative product (Townley et al., 2009). To understand
how the capitals are accumulated, it would require an analysis of the interplay between structure and agency; for a while, habitus and field gave rise to dispositions and different forms of capital held by individuals, their use relies upon the individual’s opportunity, motivation, and ability (Ozbilgin & Tatli, 2005). So it can be concluded that the creative industry’s context is closely related to the collaborative process, which requires a high level of adaptive performance every day. Besides, it is shown that in the creative industry, people played a pivotal point as the owner of its intellectual capital to make the creative product. This research will explore the important factors that drive an individual’s creativity toward the creative industry’s innovation process.

Ployhart and Bliese (2006) explained that an individual’s ability to adapt depends on the perception and understanding of contextual factors, previous experiences, motivation, abilities, personal traits, and individual strategies in regulating their decisions and behavior. Moreover, Perišić, Štorga & Gero (2017) emphasized that this adaptability plays an important role in the product development process, which involves dynamic changing from the job demand and market.

Not only that, Prebensen et al. (2017) explained that the co-creation process makes internal employees a facilitator between companies and customer needs. It was found that employee’s adaptive performance played as important factors in the customer co-creation process’s success in Australia’s surfing case. Consequently, workers’ adaptive performance became the pivotal point to collaborate and have an innovative product development process.

3. Method

This preliminary study in this paper used purposive sampling. Purposive sampling is a non-probability sampling that aims to find participants who are willing to provide the information by knowledge and information to gain the information richness and most proper utilization (Etikan et al., 2016). Thus, we selected two media companies and one software app development company in Indonesia with similar size, markets, and the same shifting phase in their product development process.

Data were gathered primarily through in-depth, semi-structured interviews of the key informants. The key informants have more than eight years of experience in the media industry and managers in those companies. So, they are aware of both industries’ dynamic changes and understand their company’s production process. The information obtained by the case studies
was supplemented by an analysis of information from external organization documents and observation (Lewis, 1998; Meredith, 1998). To obtain the validity of data, we used a within-case analysis procedure. We gathered the data from a semi-structured interview and the secondary published data about the companies (Bekhet & Zauszniewski, 2012). We also used the case study protocol to obtain data reliability.

The interview questions for the preliminary study are explained as follows:

<table>
<thead>
<tr>
<th>Table 1: Semi Structure Interview Design</th>
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<tr>
<td>Interview Questions</td>
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<tr>
<td>How is the product development process in your company?</td>
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<tr>
<td>How is your collaboration process with the clients?</td>
</tr>
<tr>
<td>How does your worker’ support the product development process?</td>
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</tbody>
</table>

Source: Produced by Authors

4. Result  
4.1 The Findings of Company A  
This company has been around for more than six years. This company is engaged in media, data, and online research. This cyber media company in Indonesia has grown rapidly in the last five years.

This company has various digital form products, from news articles, infographic, and depth analysis articles. This company collaborates with its clients in every stage of the production process. Through this process, the company has active discussions, and there is an active process of transferring knowledge to one another. This co-creation process creates various development ideas and new approaches to the production process from the clients’ perspective.

However, the company also actively provides input from its experts and determines the production process’s implementation. In the production process, communication is actively and directly carried out through the marketing division and specialists from internal companies to clients. Company A’s production process involves collaboration between specialists in the company and clients by generating new ideas and innovation. The process requires workers in this company to have high creativity and interpersonal skills. This company also encourages its workers to do active and continuous
learning because products are made based on various information and data that change from time to time. Employees in this company must also learn how to manage stress resulting from dynamic changes in job demand from clients or supervisors.

Based on the interview results, Company A’s industry type tends to change rapidly and has a high competition level. This company encourages workers to have high adaptive performance. This adaptive performance also plays an important role in supporting the co-creation process with customers, especially related to the conflict management between parties, both within organizations or with the clients. In order to enhance the co-creation process, companies had a dynamic collaboration within divisions. This company used their specialist from each divisions and marketing team to mediate the co-creation process. Not only that, the managers and company policies drove employees to be more agile and flexible.

4.2 The Findings of Company B

This media company has been around since 1885. Initially, it was a newspaper publishing company, but since 2016, the company has developed into a media provider of information, especially in the business sector, both in printing and digital platforms. Thus, this company is one of Indonesia’s media companies that carry out a digital transformation process.

Company B is a media company that is transitioning its product platform from printing to digital. It has been shown that this company has made various changes in terms of the work processes and employees’ skill-sets. This company is in the exploration phase of the digital market. Therefore, this company requires its workers to have the will and carry out a continual learning process with various opportunities based on more diverse forms of platforms and information sources. The learning culture is also applied to the corporate culture by promoting the learning process in support of the innovation process.

The process of exploring the digital market is also carried out in collaboration with the transfer of knowledge from external experts or clients. However, in the production process, active and direct communication through the marketing division acts as a mediator between the company and the clients. This process had led the company to be more open to the co-creation process. However, Company B also actively provides input according to their expertise and knowledge and fully holds implementation decisions in the product development process. Therefore, this company encourages its
employees to be ready with new things and have good interpersonal skills with clients. The company also demands good workload stress management and a high level of creativity, especially in exploring various digital market opportunities. This company’s culture urges the employees to have an explorative and trial-error learning toward the new opportunities in the market. They used marketing team as communicator between companies and clients.

4.3 The Findings of Company C
Company C is a software application development company based in Indonesia. It has been around for 12 years, starting with small projects, and has served many companies. Aside from providing application development and business process services, the company also conducts training services. The third company is an application development company. This company has a production process that comes from the collaboration of several specialists within the company. In developing each application, the company actively collaborates and has active discussions with external experts and clients. The co-creation process is open, but the company still provides consulting services based on the end-users of the application. Also, the implementation of the production process is held by the company.

However, in the production process, communication is active and direct through the product owner division as a mediator between the company and the clients. In certain situations, the product owner also invites internal companies’ specialists to streamline the existing co-creation process.

The production process in Company C tends to involve various parties with different views and ideas. So that interpersonal skills play an important role in supporting the collaboration process in developing these applications. Interpersonal adaptability is important to minimize conflicts that occur both internally and with clients. Also, this company realizes that the product form of the application is very dynamic and rapidly changing. Therefore, employees in this organization need to manage work stress and have an open mindset with changes in market and supervisor demands. To maintain the dynamic market and volatile technological change, this company used an agile approach through scrum method to finish their project with clients. They also focus on user needs rather than clients perspective, so they more dominant in the knowledge combination process. This company’s policies also demand the employees to be more agile and collaborative between divisions. They used
the product owner as the communicator between company and clients in co-creation process.

This type of application product also demands high creativity from its workers to create innovative applications that are not easily obsolete. This company also encourages its employees to learn new things related to work to stay aware of market conditions, which rapidly change. Therefore, the importance of an active learning process, being open to change, is a corporate culture built in this organization. Through the explanation above, we can see that these three companies have an open and active co-creation process with clients but have high control from the company’s internal parties. These three companies also require employees to have an active, continuous learning process, work stress management skills, interpersonal skills, and high creative abilities. These things support workers in carrying out a good co-creation process with clients and effectively creating various production processes. The difference is the communication process that occurs actively and directly between the internal company and the clients. The summary of the findings of the preliminary study is shown in Table 2.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Company A</th>
<th>Company B</th>
<th>Company C</th>
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<tbody>
<tr>
<td>Creativity</td>
<td>Workers tend to do a process of generating ideas and different information every day in the production process</td>
<td>Companies require workers to be able to innovate products based on exploration in the digital market.</td>
<td>The type of digital product of this company tends to be easily obsolete so that it requires workers to always be creative in the product development process.</td>
</tr>
<tr>
<td>Learning Effort</td>
<td>Workers are required to have an active and continuous learning process.</td>
<td>This company demands that its workers are willing to actively and had continual learning.</td>
<td>This company requires workers to learn about new things related to work due to the type of product that is easily obsolete.</td>
</tr>
<tr>
<td><strong>Handling Work Stress</strong></td>
<td>Workers must be able to manage work stress based on dynamic changes in the job demand.</td>
<td>Employees must be able to manage job stress based on dynamic job demands.</td>
<td>This company demands that its employees have good stress management skills and open toward the dynamic changes from inside an organization or market.</td>
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<tr>
<td><strong>Interpersonal Adaptability</strong></td>
<td>Workers must have good interpersonal skills in supporting the successful collaboration process with other specialists or external parties.</td>
<td>In order to have better collaboration, employees are required to have good interpersonal skills.</td>
<td>Workers must have good interpersonal skills with various conditions to minimize conflicts with internal and external parties of the company.</td>
</tr>
<tr>
<td><strong>Reactivity of Emergencies</strong></td>
<td>Companies urge the worker ready with the various changes from the clients</td>
<td>Companies urge the worker ready to learn new things because of the dynamic changes from the market</td>
<td>Because of the product is easily obsolete, the companies urge the worker open with changes both from organization or market.</td>
</tr>
<tr>
<td><strong>Company’s Role toward Co-Creation Process</strong></td>
<td>Company’s work flow had collaborative and open knowledge sharing</td>
<td>The co-creation process is based on trial-error and explorative method, had collaborative and open knowledge sharing</td>
<td>Company’s work flow based on scrum method, had user oriented rather than client oriented and collaborative and open knowledge sharing</td>
</tr>
<tr>
<td><strong>Co-creation Mediator</strong></td>
<td>Manager and Marketing</td>
<td>Marketing</td>
<td>Product Owner</td>
</tr>
</tbody>
</table>
Company’s Role toward Worker’s Adaptivity

Managers drove worker’s toward agile behavior, collaborative learning, and had flexible company’s policies

Managers facilitates worker to explore the market actively and had collaborative learning through policies.

Company’s policies drive workers into continual self-development and managers facilitate the agile work process

Source: The Author

4.7 Within Case Analysis

Based on the findings in Table 2, it was found that three companies had all the four dimensions of individual adaptive performance. As we can see, based on the reactivity, an emergency was not found in those three companies. Specifically, the three companies urge high creativity in their production process. It is derived from their type of product that is based on the collaboration of various specialists. It was also found that learning effort is important for their performance. Worker’s learning effort helps them fulfil the job demand both from the clients or their supervisor. Because of the market's dynamic change, it urged the employees to have better performance in handling the emergency or crisis situation and their work stress. It is showed that this dimension has the same value toward the dynamic changes in work situations (Charbonnier-voirin & Roussel, Roussel, 2012).

Moreover the product in these two sectors is highly related to technological innovation. Therefore, their products are easily obsolete, and market changes are very dynamic. Lastly, it was also found that interpersonal adaptability played a crucial point in helping the employee become the top performer in the companies. It is showed that the three companies had high collaboration within the internal organization and the customer. Therefore, interpersonal adaptability determines the success of generating the idea and building the new product.

It was also found that those four characteristics become the organization’s culture that has to fulfil by the employee. It is showed the importance of employee’s adaptive performance as the facilitator agents to managing co-creation process with the customers (Prebensen et al, 2017). The empirical evidence also showed the importance of company’s role to drive the employees to have an active collaboration in knowledge sharing, flexible and
adaptive with the dynamic job demand. It is found that those help the successes of knowledge combination in the co-creation process.

On the other hand, we found that the customer co-creation process in those three companies had a similar process. The customer co-creation process is depicted in Fig 1. As explained in the findings, customer co-creation began with the idea of collaboration between the company and the customer. Then the internal company executes the production process. This process is derived from various specialists’ collaboration based on the type of product in this industry. Also, there is an iteration of the communication process between the company and the customer.

Lastly, the worker’s iteration process and exploration emerged the new product and process with more innovative approaches. Therefore, it can be concluded that these three companies had an open collaboration with the customer but had the company led-process. This characteristic aligns with the tinkering co-creation process (O'hern & Rindfleisch, 2010). This iterative collaboration process between the customer and the company provides various perspectives and new knowledge to create new, innovative products with less asymmetric information risks. Thus, this co-creation process becomes one of the company’s resources in generating sustainable competitive advantage.

Figure 1: The Tinkering Co-Creation Process

Source: The Author

5. Conclusions
The findings showed that this customer co-creation process is closely related to the context of workers’ adaptive performance. It showed that
workers are the main facilitator between the company and the customer in the new product development process. Also, the customer co-creation process is a practice that shows a more dynamic and active relationship between the company and the customer. Thus, this customer co-creation process becomes one of the company’s sustainable competitive advantage sources through a long-term collaborative process towards more innovative products. The previous research that discussed the customer co-creation process through a human capital perspective was rare. For example, the evidence that was found the relationship between the co-creation process and employee's factors are emotional intelligence factors (Xie, Guan & Huan, 2019) and individual ambidexterity factors (Luu, Rowley & Dihn, 2018).

Meanwhile, this study provides new findings with a more comprehensive perspective of employee behaviour in the customer co-creation process, namely in the context of individual adaptive performance. Adaptive performance includes all the behavioural factors that support successful collaboration in the co-creation process, from creativity, learning effort, handling work stress, interpersonal adaptability, and reactivity of emergencies. Practically, this study's results indicate that companies need to manage their employees to be able to have adaptive behaviour and performance in the workplace to ensure success in creating innovation through the co-creation process.

However, this research is still in the form of a preliminary study and is only based on limited interview data. Future research can explore the factors and work processes of workers that support the customer co-creation process’s success rather than from organizational perspective to gain deeper explanation toward this phenomenon. Future research can also examine, in more depth, the process of customer co-creation based on a digital approach. Not only that, we also suggested to explore the context of co-creation with the open innovation.

6. References


