

# Employee Creativity as Moderation between Ambidexterity Organization and Innovation Performance: SMEs in East Kalimantan

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**Abstract.** Product innovation is a point of interest for consumers to buy products. Organizational ambidexterity is the company's ability to pursue innovation through exploitative and explorative means, thereby influencing employee innovative performance. Technology readiness by organizations and employees is a benchmark for the success of product development. The problem that often occurs is that not all employees are ready for technology and innovation which has an impact on increasing innovation and product performance. Product innovation certainly cannot be separated from employee creativity. Creativity is important in creating competitive advantage and creative industry performance. The purpose of this research is to investigate the importance of developing organizational ambidexterity and organizational technology readiness as well as employee creativity in improving organizational innovation performance. By doing this, this research tested the moderation of employee creativity (EC) on the relationship between organizational ambidexterity (AO) and innovation performance (IP). By applying a quantitative and cross-sectional design and analyzing the results of a questionnaire on 100 SMEs in East Kalimantan, it was found that AO had a positive and significant effect on IP, while EC had a positive and significant effect on AO but had a negative and insignificant effect on IP. EC moderates and has a positive and significant influence on the relationship between AO and IP as well as AO and IP. This research contributes to the advancement of organizational capability theory by adding the important role of employee creativity in achieving innovation performance.

## 1 Introduction

The role of Micro, Small and Medium Enterprises (SME) is very significant for the growth of the Indonesian economy, through the various products produced by SMEs, both locally, nationally and for export markets. The existence of SMEs not only aims to increase regional income and absorb labour but also plays a role in providing creative and innovative ideas which are realized through their products. Innovation is one of the obstacles in the development and competition between SMEs [1] in the global market. Innovation means new

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and different from what has previously existed. Product innovation is a point of interest for consumers to buy products. SME innovation covers many things, including innovation in terms of product diversification, taste, production processes, product marketing strategies through online application technology and many other things. The low performance of SMEs in innovation is influenced by several factors including limited business capabilities, weak capital, limited human resources both in number and resource capacity, creative value creation in product development, and weak competitive ability [2], the business networking capabilities and market penetration capabilities, organizational ambidexterity, business climate that is not conducive yet, limited business facilities and infrastructure, implications of regional regulations related to business actors [3], also less than optimal success of regional economic activities [4- 5].

To improve the performance of SMEs, it is necessary to develop ambidexterity innovation in the form of balancing explorative and exploitative actions within the organization, for example developing capabilities in technology, product development, variations in customer preferences and organizational management. [6]. SMEs with an ambidexterity strategy can be better at allocating resources, can become more efficient through exploitation and can engage in experimentation by generating new ideas (innovation) through exploration and by anticipating and adapting toward turbulence, which is a requirement for organizational resilience. Organizational ambidexterity (AO) is defined as a firm's ability to pursue exploitative and explorative innovation [7-9]. The exploitation activities are intended to expand currently existing knowledge, seeking greater efficiencies and improving to enable additional innovation. Meanwhile, exploration is an activity in developing new knowledge or looking for variation and novelty needed for more radical innovation [10]. The interaction of exploration and exploitation behaviour, in turn, is assumed to influence employee innovative performance, so that innovative performance is highest when both exploration and exploitation behaviour are high [11].

Customers will be more likely to use and have a more optimistic perspective on goods and services whose businesses are optimistic, creative and ready for technology. However, in reality, not all users or organizations are ready to accept the services provided by technology. Technology readiness should not be overlooked when evaluating client acceptance of technology-enabled services. Its function must be explained and incorporated into any model of technology acceptance, particularly in industrial innovation and organizational ambidexterity [12]. In the research, [12], The result showed that technology readiness influences organizational ambidexterity both directly and moderately.

Organizations that want to create and maintain competitive advantage must increase their ability to innovate [13]. Innovation performance (IP) is the result of innovation [14] and is the process of creating new ideas that include products, services, processes and management practices to achieve organizational goals. Innovation performance is the result of the successful transformation of innovation resources and capabilities into innovation market success [15]. A work organization that wants to achieve good IP must determine the determinants of efficiency, processes and capacity dynamically by studying and utilizing resources and technology according to the business environment.

Creativity in work organizations is important, which is considered a competitive asset and is considered capable of motivating employees to innovate. Creativity is also said to be a tool for sustainable development, where employees are required to be able to create various forms of creativity and be able to evaluate creative processes and output from a sustainability perspective. [16]. Creativity for sustainability," which views sustainability not as a means but as an end in itself. In research [17] Employee creativity (EC) will influence employee psychology, influencing innovative behaviour and competitive behaviour [18]. From several previous studies, there is a gap that is an opportunity in this research, namely the role of

creativity as a moderator in the relationship between ambidexterity and innovation performance.

## **2 Theoretical Framework and Hypotheses Development**

### **2.1 Ambidexterity, Innovation Performance**

Rapid changes in the environment, especially technology and consumers, force the creative industry to make adjustments by adopting knowledge, skills and technology. For the sake of business progress, an organization must make large capital investments in the technology sector, including providing employee training and skills related to readiness for new technology [19-20]. Readiness to face technological transformation in managing, utilizing and adapting is a responsibility of both the organization and employees [21-22] and technology readiness is often examined to understand the level of employee readiness for the use of technology in an organization.

Previous research found that employees can utilize technology and adapt to new technical skills [22-23], thus having an impact on employee performance [24]. In another research, it has been proven that the use of new technology can increase employee work effectiveness [25] and has the potential to increase adaptive and innovative performance by employees. Information and communication technology is also said to have a major influence on the innovation performance of an organization [26].

Ambidexterity is defined as the ability of an organization to exploit organizational capabilities and explore opportunities in the future. Exploitation is related to refinement, efficiency, selection and implementation, while exploration is related to search, variation, experimentation, and discovery/innovation [27]. Ambidexterity organizations that can pursue exploitation and exploration strategies simultaneously will have a greater chance of outperforming businesses that focus on one strategy at the expense of the other. Organizational ambidexterity is an important factor in maintaining long-term success [28-29]. Ambidexterity positively influences company performance [26,30-31]. Meanwhile, the research [32] stated that employee innovation performance is influenced by employee ambidexterity through employee exploitation and employee exploration activities. Therefore, we put forward the following hypothesis:

**Hypothesis 1.** AO has a positive influence on company IP.

### **2.2 Creativity, Organizational Ambidexterity and Innovation Performance**

Creative employees have characteristics, namely: openness to experience, unusually seeing things, curiosity, accepting and adapting to seemingly opposites, accepting differences, and believing in themselves. Entrepreneurial creativity is measured by the ability to create, modify and combine. A successful person is the

person who thinks and innovates, doing something new or doing something old in a new way [33]. Innovation is defined as the ability to apply creative solutions to problems and opportunities to enhance or enrich the achievement of business success by taking advantage of new opportunities that arise from changes in the business environment.

Creativity is defined as the ability to find new ideas and new methods to face organizational challenges and opportunities, while innovation is the ability to find ways to solve problems. The birth of innovation begins with individual creativity [34] and creativity and innovation behavior [18] is important in creating competitive advantage and creative industry performance [35]. Ambidexterity includes a leader's ability to stimulate exploitative

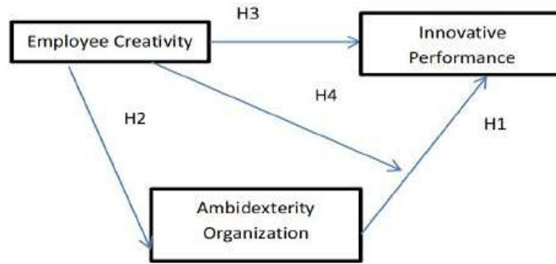
and exploratory activities in employees. From these exploratory activities, it appears that EC has a significant influence on AO. Therefore, we put forward the following hypothesis:

**Hypothesis 2.** EC has a positive influence on AO

**Hypothesis 3.** EC has a positive influence on company IP

**Hypothesis 4.** EC as a moderator influences the relationship between AO and company IP.

The conceptual model is shown in **Fig. 1**. The model suggests that AO has a positive influence on company IP. EC as a moderator influences the relationship between AO and company IP. EC has relationship on company IP.



**Fig. 1.** Conceptual model

## 3 Method

### 3.1 Sample and Procedure

In this research, respondents were used to explain the relationship between research variables, and the data was analyzed using a quantitative approach. The respondents of this research were SME owners in East Kalimantan. This research aims to examine and analyze the relationship between AO, IP and EC as moderators.

The operational definition of the research variables is explained as follows: Technology readiness is defined as the level of readiness of the organization and employees towards the use of technology [17]. AO is the ability of an organization to balance organizational exploration and exploitation in the introduction of new technology with the preservation of existing technology [12]. EC is the ability of employees to explore ideas with problem-solving methods adopted and refined from previous research [18]. IP is the overall achievement of the company as a result of renewal and improvement efforts carried out by considering various aspects of company innovation, namely processes, products, organizational structure, etc[15].

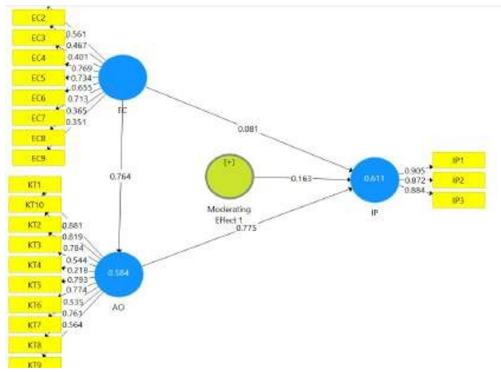
### 3.2 Measurement

The sampling technique used purposive sampling. This method was used by considering the criteria for SMEs that have been operating for at least 3 years and were actively carrying out product innovation. Data collection was carried out by sending questionnaires and telephone interviews. There were 120 questionnaires distributed and 100 were returned. The measurement of questionnaire items used a "likert scale from 1 to 5" with ratings from strongly disagree to strongly agree and analyzed by using the SMART Partial Least Square (PLS) program, and it was hoped that the results of the data analysis would explain the relationship between research variables.

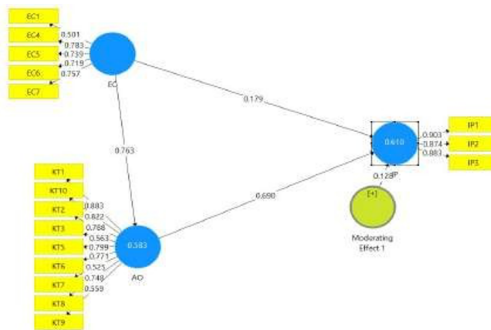
## 4 Results and Discussion

### 4.1 Measurement Models: Validity and Reliability

Based on the outer loading data, of all the AO, EC and IP variable indicators that have a value of less than 0.5 are the EC2, EC3, EC8, EC9, and KT4 indicators, so the data is said to be invalid and the data must be discarded (**Fig. 2**). After the data was discarded, validity testing was carried out again on all the remaining variable indicators and all valid data was produced (**Fig. 3**) and then measured again. To see the discriminant validity, based on the AVE value of each variable (**Table 1**) it was greater than 0.5, which means the discriminant validity value is met. The reliability test can be seen from the Cronbach alpha value for each variable >0.7 (**Table 1**), which means the variable is reliable.



**Fig. 2.** Path diagram with several variable indicators that are not valid yet



**Fig. 3.** Path diagram with valid indicators

**Table 1.** AVE and Cronbach Alpha Variable Values

	Cronbach Alpha	Rho_A	Composite Reliability	Average Variable Extracted (AVE)
AO	0.884	0.906	0.908	0.531
EC	0.747	0.773	0.831	0.500
IP	0.866	0.883	0.917	0.786
Moderating Effect 1-> IP	1.000	1.000	1.000	1.000

#### 4.2 4.2 Hypothesis Test

Testing of the hypothesis of the influence of endogenous variables on endogenous variables is carried out by looking at the value of the Path Coefficient (**Table 2**), where the P-value value is  $> 0.05$ , meaning the hypothesis is significant.

**Table 2.** P-Values of relationships between variables

	Original Sample (O)	Sample Mean	STDEV	T-Statistics	P-Values	Conclusion
AO -> IP	0.690	0.684	0.099	6.918	0.000	Accepted
EC -> AO	0.763	0.771	0.017	20.615	0.000	Accepted
EC -> IP	0.179	0.191	0.096	1.868	0.062	Rejected
Moderating Effect 1 -> IP	0.128	0.136	0.048	2.661	0.008	Accepted

Based on the table above, it can be concluded that: (1) AO has a significant effect on the company's IP; (2) EC has a positive influence on AO; (3) EC does not have a positive influence on company IP; (4) EC as a moderator influences the relationship between AO and company IP. The findings of this research explained the role of organizations in developing their resource capabilities to advance their business. Human resource development, as one of the efforts to explore and exploit ambidexterity, such as providing more training, increasing IT skills and organizational knowledge, as well as changing and reconfiguring structural systems would bring innovation and technological change, and superior business.

## 5 Practical Implication, and Recommendation for Future Research

Although this empirical study supported the direct hypothesis between AO, EC and IP the results also showed some limitations. The findings of this study supported that the close interaction between AO and IP as well as EC and AO, would increase business value creation and empower employees' theoretical and practical abilities and knowledge. This study was analyzed using SME data from East Kalimantan by targeting all SMEs in that region. Therefore, the findings were influenced by differences in obtaining competent resources and utilizing them. The further research is also expected to cover more SMEs in certain fields with adequate resources. This research recommended that the further research be able to explore more deeply and examine other factors such as technology readiness in employees, readiness for change and knowledge absorption.

## 6 Conclusion

This research investigates the important role of EC in the relationship between AO and IP in a model that represents a gap in the literature on ambidexterity and innovation performance. These findings provide theoretical and empirical evidence regarding the influence of AO, and EC on IP. This research develops and expands previous frameworks regarding the AO, EC and IP literature. The findings of this research confirmed that SMEs in East Kalimantan would increase their knowledge about the importance of developing EC in terms of innovation in production results to achieve the best organizational IP. Even though the results on employee creativity did not have a significant effect on innovation performance, the study stated that the business environment, facilities and capital resources were able continue to be

developed to produce endless innovation for organizations. Future research is needed to prove the influence of technology readiness factors on employees, readiness for change and also knowledge absorption in achieving organizational innovation performance.

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