Performance Improvement Through The Innovation And Competency Of Tanoker And Batik Creative Industry In Jember

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Abstract: The objectives of this research are: (a) to analyze the model of the optimization of the empowerment and performance improvement of Small and Medium Enterprises (SMEs) by identifying and analyzing the external and internal conditions, human resource capability, new product development capability, and production and operation capability, (b) to analyze the competency level that consists of knowledge, skills, and abilities of the human resources of the SMEs and (c) to examine the effect of internal and external factors and human resource competencies on the innovation capability and performance of the SMEs. The population of this study was all SMEs' workers or craftsmen in the creative industry center located in Jember that consisted of 30 persons from SumberJambe Batik and 20 persons from Tanoker. Census sampling was applied in this research. Data were analyzed by using Partial Least Square (PLS). Results show that most respondents agree and give positive assessment on the external factors of the SMEs of SumberJambe Batik and Tanoker. Most respondents also give positive evaluation on the level of human resource competency of the SMEs that consists of knowledge, skills, and abilities. The competency factor of human resources has a positive effect on the innovation capability of the employee. Thus, the hypothesis which states that internal factors, external factors, and human resources competency positively affect the performance of SumberJamber Batik and Tanoker in Jember is accepted.

Index Terms: Internal Factors, External Factors, Competency, Human Resources, Innovation, Performance

1 INTRODUCTION

Creative economy has positive contribution in building a nation by exploring and developing the creative potential of each country. Indonesia has many creative economy potentials. Indonesian government is responsible to support and develop creative industry as it gives positive effect on national economic growth. Cultural diversity, uniqueness of natural resources, creative competencies of Indonesian people, and promising domestic market are the main assets for the existence and the development of creative industry. The fast development of Batik enterprises in Jember Regency, East Java Province, indicates that the business is very prospective as more businessman interested in joining the industry. Overall, the investment in Batik industry has reached 285 million rupiahs turnover per year. The total number of people working in Batik industry in Jember is 150 people, which are divided into 3 industrial businesses producing 5,000 pieces of Batik fabric per year. Local people of Jember running Batik enterprises not only because they have the competency to develop the business that will finally contribute to increase per capita income and regional economic growth, but they also contribute in promoting and preserving local culture. Another prospective creative industry in Jember is Tanoker. Tanoker word is taken from the Madurese language which means cocoon. Tanoker is a business group located in Ledokombo Village, Ledokombo District, Jember Regency, East Java Province. Ledokombo is a district with a population of about 56,000 people. Most of its people work as farm workers. The others work as traders or factory workers. Tanoker business contributes in promoting local culture, especially stilts as its icon.

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It also produces many kinds of handicrafts made from textile material (e.g., wallet, pencil case, coin purse, laptop bag, and seminar bag), wooden handicrafts (e.g., kitchen equipments from coconut shell and the miniature of wooden stilts), and various brooches and necklaces made from beads and rocks. The key factor of innovation capability that significantly affects company's innovative activities have been explored in many studies. However, there are some differences on research findings, especially in answering the critical question as proposed in this research, which is how to build innovation capability in small and medium scale industries in Jember. Therefore, innovation capability is a significant factor in performance improvement. According to the condition analysis as explained previously, the model of innovation capability and competency development of SMEs should be seriously analyzed. Therefore, the objectives of this research are: (a) analyzing the model of optimizing the empowerment and improvement of SMEs' performance by identifying and analyzing its external conditions, internal conditions, and innovation capabilities including human resource capability, new product development capability, and operation and production capability, (b) analyzing the competency level that consists of knowledge, skills and abilities of the SMEs' human resources, and (c) examining the effect of internal factors, external factors, and human resource competency on innovation capability and performance of SMEs in Jember Regency.

2 LITERATURE REVIEW

2.1 Innovation Capability

Capability is defined as an integrated process designed to implement a collection of company knowledge, skills, and resources. A company resource-based perspective suggests that the expected outcomes of a company's management efforts are the creation and the transmission of sustainable competitive advantage that resulted in an excellent business performance. From a resource-based perspective, competitive advantage can be achieved by exploring the key assets or capabilities of a company or organization (Baldwin, 1999).

Byrd et al. (2002) classified the first two criteria as part of the description of the condition in a corporate level or in the overall capabilities, and the last criteria as the capability of the business unit. The three criteria lead to and influence the marketing actions of a company. This study adopts dimension of marketing capability variable referring to Tsai (1991) that measures the variable with the marketing mix approach, i.e., distribution channel, marketing research and product development, pricing strategy, and promotion management. This concept has also been developed by Chowdhury (1990) which focuses to pricing, promotion, product development, and distribution channel. As product development and marketing cannot be separated, this study adopts the concept of Tsai (1991) using a performance approach on the marketing mix .

The core capability of a company is a core competency concept as stated by Andrew (1996) that a company's capability to enter new business segments depends on its capability to perform successfully. In addition, strategies and ability should be sinergized in order to achieve company goals (Lyle, 1995).

2.2 Human Resource Competency

Competency is a skill that a person needs as demonstrated by his ability to consistently deliver an adequate or a high level performance within a specific job function. According to Sofo (1999: 160) in Rahmani (2004), competency consists of skill, knowledge, and attitude. In specific, Sofo stated that the application of skills, knowledge, and attitude must be in line with the required performance standards in the employment sector. McClelland in Rivai and Sagala (2005: 302) defines competency as a person's fundamental characteristic which has a direct impact on, or can predict, the excellent performance. In other words, competency is what the outstanding performers do often in many conditions with better results compared to what the average performers do. Competency is closely related to performance, both individual performance and organizational performance (company). According to Burgelman (2001) one's performance is based on an understanding of the science, skill, expertise, and behavior necessary to do the job well. While the performance of the organization (company) is based on how the company's management responds to the external and internal conditions, which with certain benchmarks, it will be able to find out the level of turbulences and the level of ability to anticipate it.

2.3 The Performance of SMEs

Performance is a result of work that can be achieved by a person or a group of people within the organization based on their respective authorities and responsibilities in order to achieve organizational goals (Swamidass, 1987). If the individual performance is good, then most likely the performance of the company or organization will be good as well.

3 METHODOLOGY

This is a descriptive research aims to describe the condition of population competency or empirical facts. This research was conducted in Batik business center in SumberJambe District and in Tanoker handicraft business center in Ledokombo District, Jember. The primary and secondary data were analyzed proportionately. The population of this study was all the business actors, including owner, manager, and the employee working in SMEs creative industry that consisted of 30 persons from Batik SumberJambe and 20 persons from Tanoker. This research applied census sampling, which the population is used as the sample and consisted of 50 respondents. Data were analyzed using Partial Least Square (PLS) to test the effect of internal factor, external factors, and human resource competency on the innovation capability and performance of the SMEs.

4 RESULT AND DISCUSSIONS

4.1 Results

Assessment of Respondents on External Conditions, Internal Conditions, and Innovation Capability

External conditions, internal conditions, and innovation capabilities (human resource capability, new product development capability, and operation and production capability) have significant contribution to the development of SMEs. Based on the data collected from interviews and questionnaires distributed to 58 respondents, the respondents' profile is described in Table 1. Table 1 shows that the majority of respondents are senior high school (including vocational school) and junior high school graduates. Most of them (86%) are the workers or craftsmen. It indicates that the craftsmen of SumberJambe Batik and Tanoker SMEs are less educated. However, the companies have trained them to support the development of the existing creative industries in SumberJambe and Tanoker. Based on respondents' assessment about the internal factors, most of them (48,38%) gave strongly agree opinion. The average result of most respondents with strongly agree answers is 57.6% while a small part of them, which is 3.5%, answered that they disagree. It indicates that SMEs of Batik SumberJambe and Tanoker have good internal factors. Related to the external factors, most respondents also responded positively by showing their strong agreement. It means that the respondents felt and perceived that the external factors of the SMEs in SumberJambe Batik and Tanoker are already optimal.

Table 1: *Profile of Respondent*

Educational Background			
No.	Description	Amount	%
1	University graduates	5	9
2	Senior high school/vocational school graduates	30	52
3	Junior high school graduates	18	31
4	Elementary school graduates	5	9
	Total	58	100
Status			
No.	Description	Amount	%
1	Owner	3	5
2	Manager	5	9
3	Workers/Craftsmen	50	86
	Total	58	100

Source: *Processed data, 2017*

The Competency Level that Consists of Knowledge, Skill, and Ability of Human Resources of the SumberJambe Batik and Tanoker SMEs in Jember.

Regarding the competency that consists of knowledge, skill, and abilities of the human resources of SMEs SumberJambe Batik and Tanoker in Jember, the average respondents stated that they are agree, which is 30.60 %, while the other 6 % stated that they are strongly agree, and another 6 % gave disagree opinion. The existence of good human resource competency in SumberJambe Batik and Tanoker SMEs in Jember can be indicated from what the workers perceived, thought, felt, and experienced.

The Effect of Internal Factors, External Factors, and Human Resource Competency on the Innovation Capability and Performance of the Craftsmen of SumberJamber Batik and Tanoker SMEs in Jember

This section describes each path in the model using path analysis. Each tested path indicates the direct or indirect effect of the internal factors, external factors, and human resource competency on innovation capability and performance of the workers in SumberJambe Batik and Tanoker SMEs, Jember. Prior to the testing of direct or indirect effect, each path was tested for its significance. If the path was not significant, then, referring to the trimming theory, the path would be eliminated. The results of path analysis and hypothesis testing are described in Table 2.

Table 2: *Results of Path Analysis and Hypothesis Testing*

Hypo-thesis	Independent Variable	Dependent Variable	β	t-value	P-value
1	Internal Factors (X1)	Innovation Capability (Z)	0.138**	2.477	0.034
2	External Factors (X2)	Innovation Capability (Z)	0.231**	2.546	0.012
3	Human Resource Competency (X3)	Innovation Capability (Z)	0.132**	2.771	0.034
4	Internal Factors (X1)	Performance (Y)	0.156**	2.647	0.042
5	External Factors (X2)	Performance (Y)	0.250**	2.713	0.080
6	Human Resource Competency (X3)	Performance (Y)	0.198**	2.352	0.260
7	Innovation Capability (Z)	Performance (Y)	0.101**	2.586	0.047

**Sig. α = 5%

Source: SPSS Output, 2017

According to the results of regression coefficient, the model formulation is as follows:

Z = 0.138X1 + 0.231X2 + 0.132X3

Y = 0.156X1 + 0.250X2 + 0.198X3+ 0.101Z.

Hypothesis Testing Results:

a. H1: internal factors (X1) have a positive effect on innovation capability (Z) of the craftsmen.
   According to Table 2, the beta coefficient (β) is 0.138 with the ρ-value 0.034. Since the ρ-value <α or 0.034 < 0.050, then H1 is accepted. Thus, the hypothesis stating that internal factors have a positive effect on innovation capability of the craftsmen is accepted.

b. H2: external factors (X2) have a positive effect on innovation capability (Z) of the craftsmen.
   According to Table 2, the beta coefficient (β) is 0.231 with the ρ-value 0.012. Since the ρ-value <α or 0.012 < 0.050, then H2 is accepted. Thus, the hypothesis stating that external factors have a positive effect on innovation capability of the craftsmen is accepted.

c. H3: human resource competency (X3) has a positive effect on innovation capability (Z) of the craftsmen.
   According to Table 2, the beta coefficient (β) is 0.13. withρ-value 0.34. Since the ρ-value <α or 0.034 <0.050, then H4 is accepted. Thus, the hypothesis stating that human resource competency has a positive effect on the innovation capability of the craftsmen is accepted.

d. H4: internal factors (X1) have a positive effect on the performance (Y) of the craftsmen.
   According to Table 2, the beta coefficient (β) is 0.156 with ρ-value 0.042. Because the ρ-value <α or 0.042 <0.050, then H4 is accepted. Thus, the hypothesis stating that the internal factors have a positive effect on the performance of craftsmen is accepted.

e. H5: external factors (X2) have a positive effect on the performance (Y) of the craftsmen.
   According to Table 2, the beta coefficient (β) is 0.250 with ρ-value 0.0008. Since the ρ-value <α or 0.008 < 0.050, then H5 is accepted. Thus, the hypothesis stating that external factors have a positive effect on the performance of craftsmen is accepted.

f. H6: human resource competency factor (X3) has a positive effect on the performance (Y) of craftsmen.
   According to Table 2, the beta coefficient (β) is 0.198 with the ρ-value 0.026. Since the ρ-value <α or 0.026 < 0.050, then H6 is accepted. Thus, the hypothesis stating that human resource competency has a positive efffect on the performance of craftsmen is accepted.

g. H7: innovation capability of the craftsmen have a positive effect on performance.
   According to Table 2, the innovation capability variable has a beta (β) value of 0.101 with the ρ-value 0.047. Since the ρ-value <α or 0.047 < 0.005, then H7 is accepted. This means that innovation capability of the craftsmen has a positive effect on the performance.

According to Table 2, it can be stated that all independent variables have significant effects on the dependent variables. It means that no paths are eliminated. The following figure shows the hypothesis with the path coefficient.

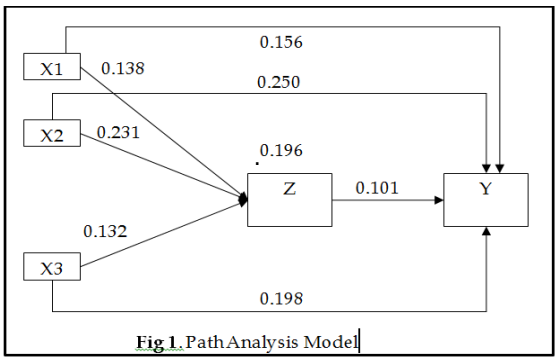

Figure 1. *Path Analysis Model*

Referring to Figure 1 (path analysis model), the direct and indirect effects of internal factors, external factors, and human resource competency on the performance are calculated. Table 3 shows the magnitude of the effect based on the calculation of the cross-coefficients of each variable. According to the calculation of cross-coefficient in Table 3, it appears that the total effect of internal factors (X1) on the innovation capability of the craftsmn's is 13.8% which is a direct effect. The effect of residual variable (ε1) or variables other than X1, which is not explained by the model, is 92.8%. The effect of external factors (X2) on the craftsman's innovation capability is 23.1% which is a direct effect. The effect of residual variable (ε1) or variable other than X1, which is not explained by the model, is 87.6%. The effect of competency (X3) on the craftsman's innovation capability is 13.2% which is a direct effect. Furthermore, the effect of residual variable (ε1) or variables other than X1, which is not explained by the model, is 93.1%.

Table 3: *The Calculation of the Direct Effect, Indirect Effect, and the Total Effect*

Description	Direct Effect	Indirect Effect	Total Effect
	(A)	(B)	C = A + B
The effect of X1 on Z			
X1 → Z	0.138	-	0.138
Residual (ε1)			0.928
The effect of X2 on Z			
X2 → Z	0.231	-	0.231
Residual (ε1)			0.876
The effect of X3 on Z			
X3 → Z	0.132	-	0.132
Residual (ε1)			0.931
The effect of Z on Y			
Z → Y	0.101	-	0.101
Total Effect	0.101	-	0.101
The effect of X1 on Y			
X1 → Y	0.156		0.156
Description	Direct Effect	Indirect Effect	Total Effect
	(A)	(B)	C = A + B
X1 → Z → Y	-	0.013	0.013
Total Effect	0.156	0.013	0.169
Residual (ε1)			0.911
The effect of X2 on Y			
X2 → Y	0.250		0.250
X2 → Z → Y	-	0.023	0.023
Total Effect	0.250	0.023	0.273
Residual (ε1)			0.856
The effect of X3 on Y			
X3 → Y	0.198		0.198
X3 → Z → Y	-	0.013	0.013
Total Effect	0.198	0.013	0.013
Residual (ε1)			0.888

Source: primary data, 2017

The variable of innovation capability of craftsmen has a total direct effect on craftsmen's performance (Y) that is equal to 10.1%. While the effect of internal factors variable (X1) on the performance of the craftsmen (Y) is 16.9%. The effect of the residual variables (ε2), or the variables other than X1 and Z, on the performance is equal to 91.1%. The effect of external factors variable (X2) on craftsmen's performance (Y) is 27.3%, while the effect of residual variable (ε2), variable other than X2 and Z, on performance is equal to 85.6%. The effect of competency variable (X3) on craftsman performance (Y) is equal to 21.1%. The effect of residual variables (ε2), that is variable other than X3 and Z, on performance is equal to 88.8%. Thus, the hypothesis stating that internal factors, external factors, and human resource competency have a positive effect on the performance of the craftsmen of SumberJambe Batik and Tanoker SMEs in Jember are accepted.

4.2 Discussion

Assessment of Respondents on External Factor, Internal Factor, and Innovation Capability.

The results of respondents' assessments indicate that external factor, internal factor, and innovation capabilities (human resource capability, new product development capability, and operation and production capability) are the key factors for the development and sustainability of the SMEs. Related to internal factors, most respondents gave strongly agree opinions. It indicates that the SMEs of SumberJambe Batik and Tanoker have good internal factors. Then, it can be concluded that the workers or craftsmen perceived that all external factors of the SMEs are already optimal in supporting the business development.

The Competency Level, that Consists of Knowledge, Skill, and Ability, of Human Resources of SumberJambe Batik and Tanoker SMEs in Jember.

The competency that consists of knowledge, skill, and abilities of the human resources of SumberJambe Batik and Tanoker SMEs in Jember is explained by the respondents' assessment with the average respondents gave agree opinion. Good human resource competency in SumberJambe Batik and Tanoker SMEs is indicated by the perception, feeling, thought, and experience of the craftsmen.

The Effect of Internal Factors, External Factors, and Human Resource Competency on the Innovation Capability and Performance of SumberJambe Batik and Tanoker SMEs in Jember.

a. Internal Factors Affects Innovation Capability and Performance.

The results of the study indicate that internal factors have a significant and positive effect on innovation capability and performance. These findings support the research of Romijn (2001) and Baldwin and Heyel (1990). Research findings also indicate that to achieve optimal innovation capability, the SMEs should improve their human resources capability as the internal factor. Human resource development capability is the ability of an organization to develop and improve the technical and managerial capabilities of its human resources. This effort is performed by always adjusting the employees' ability and skill with their tasks and by conducting training or human resource development programs. As stated by Baldwin (1999), high-skilled workforce is an important factor for innovation. Training programs are the main methods used to improve employee skills. Survey by Baldwin et al. (1995) suggests that employee's skill is the most important factor contributes to company growth. Respondents' evaluation of the open questions of the research revealed that SMEs are facing

difficulty in the research and development programs, especially in lack of funds and human resources. According to the observation in previous research, in general, the SMEs of SumberJambe Batik and Tanoker in Jember have no formal research and development division in their organizational structure. However, it does not mean that the management has never conducted any research and development process to produce new products. They have some informal research and development processes by allocating time and some funds from the sales for the development of new products, observing the latest product trends and market demand, and working with other SMEs managers to improve the innovation capability (Rahmani&Siyamtinah. 2009). SMEs managers have conducted serious efforts in improving employees' skills and expertises as it has positive impact on performance improvement.

b. The Effect of External Factors on Innovation Capability and Performance.

Results of this study support Baldwin et al. (2000) stating that external factors such as financial support and research and development support, the use of intellectual property rights, and the interaction with external parties are the key factors in increasing innovation activities and performance. In this study, the SMEs entrepreneurs consider that the support of government and banking sector as important factors to improve their innovation capability. Innovation will arise if there is an intensive interaction and communication between the company and its environment (Sarens, 1987; Roertson and Gatingnon, 1987 in Slappendel, 1996). According to the respondent's answer, it seems that most SMEs are facing difficulty in accessing funds from the government or the banking sectors. The guarantee system and complicated requirements are the main obstacles. The SMEs need government support in the research and development program in the form of counseling (human resources aspect), promotion (marketing aspect), as well as capital management (financial aspect). Another finding is that most respondents also expressed their lack of knowledge in managing patents for their products.

c. The Effect of Innovation Capability on SME's Performance.

Rahmani and Siyamtinah (2009) stated that the diversity of patterns to build innovation capability has no impact on the performance of SMEs. However, this study provides different results as the innovation capability has a positive effect on the performance of SMEs. Lawless and Anderson in Rahmani (2004) argue that innovation affects company performance, but depends on the complexity of the market. The more complex the market conditions, the stronger the effect of innovation on company performance. Thomas (1996) stated that innovation has an influence on company performance. There is a different perspective between this research with the previous ones. This study sees innovation in terms of the capability of SMEs to innovate or in other words the innovation capability. Meanwhile, a research by Rahmani and Siyamtinah (2009) considers innovation from the differences or diversity of patterns in building the innovative capability.

5 Conclusion

According to the overall results of the respondents' evaluations, the external factors of the SumberJambe Batik and Tanoker SMEs are having a good assessment. A good human resource competency in SumberJambe and Tanoker SMEs is indicated by what the workers or craftsmen perceived, experienced, and felt. The internal and external factors have a positive effect on innovation capability of the craftsmen. The competency factor of human resources has a positive effect on the craftsmen's innovation capability. Internal dan external factors have a positive effect on worker's performance. Human resource competency factor has a positive effect on the performance of the craftsmen. The capability of the craftsman's innovation has a positive effect on their performance.

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