

THE INFLUENCE OF ABSORPTIVE CAPACITY ON INNOVATION CAPABILITY: CASE IN INFORMAL SMALL-MEDIUM ENTERPRISES SURVEY

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Abstract: Related with the emerging concept about absorptive capacity, this study aims to explore the relationship between dimensions of absorptive capacity: acquisition, assimilation, transformation and exploitation to innovation performance by taking case in informal small-medium enterprises. This survey is very crucial to be done concern with how the circumstance of informal business innovation ability, which part of absorptive capacity that influence the most and which part which is the less, so that leverage innovation program for informal business can be done effectively. Respondents of this study were got from various type of 40 business owners. Data was analyzed using multiple regression analysis by t test and F test. The result shows that the value of the coefficient of determination is 0.646, means that the variable acquisition, assimilation, transformation, exploitation accounted for 64.6% influence to the variable innovation capability and other variables remaining constant 35.4% influenced by other variables which is not included in this study. It means simultaneously they influence significantly on innovation capability.

Keywords: *Absorptive Capacity, Innovation strategy, Informal sector business*

1. INTRODUCTION

Nowadays informal small business that are owned by women need to be survive in the middle of hyper-competition among established enterprises. Absorptive capacity from external factor become crucial elements for their business to be innovative in making qualified products. From research conducted by (Kancana and Lestari, 2015) there are three activities that should be taken to increase the productivity of the business which are owned by the Women in informal sector in DIY, those are: Knowledge Sharing among business group, absorptive capacity (ability to absorb the knowledge and skills from outside and also from the other peer group) and innovation capability (the ability to create new products and new process in production). This study purposed to explain the correlation of absorptive capacity dimensions which consist of four variables, those are acquisition, assimilation, transformation and exploitation to innovation action in informal sektor business which are possessed by women.

This survey is important to be as a prior study on innovation leveraging on informal business especially on women as the owners. As house wife, women have different characteristic in running their business. These include their capacity to acquire, assimilate, transform as well as exploit outside knowledge and skill into innovation capability in making good products.

2. THEORETICAL BACKGROUND

Absorptive Capacity

As (Pai & Chang, 2013) stated that the ability to integrate and transform the knowledge needed to improve the performance of organizational innovation, organizational innovation performance will increase if the organization has a high capability. It is corroborated the results by (Macadam, et.al, 2011) that the company's performance is the link between the concept of a source of knowledge, acquisition, assimilation and transformation of knowledge. In line with (Cohen and Levinthal in Indarti, 2010) refer to it as 'the company's ability to identify, assimilate and exploit knowledge from the environment' or also called as 'learning and absorption capacity' which is an important

representation of the ability of the company in the creation of new knowledge. Zahra and George (2002) adds that between each capability acquisition, assimilation, transformation and exploitation mutually reinforcing each other to gain more knowledge absorption capacity. While (Zahra, 2002) divides the dimension of absorptive capacity into several components as follows:

a) Acquisition

Acquisition refers to the company's ability to identify and acquire knowledge from outside that are considered important to help the company's operational activities. Efforts in the routine acquisition has three attributes that can affect absorptive capacity, namely: the intensity, speed and direction, to the intensity and speed of the company in identifying and gathering knowledge will determine the quality of the ability of the company in the acquisition of knowledge from outside.

b) Assimilation

Assimilation refers to the activities of companies to analyze, process, interpret and understand information obtained from external sources (Kim & Szulanski, in Zahra, *ibid*).

c) Transformation

Transformation is the company's ability to develop and refine, combine knowledge from the outside as well as to assimilate that knowledge with the knowledge that has been owned by the company. This can be done by adding or eliminating or simplifying knowledge in different ways.

d) Exploitation

Exploitation in the absorptive capacity is how well the company to apply new knowledge already gained from the outside environment (Cohen and Levinthal's, 1990). Exploitation is also an organization that is based on the ability of the routines in the filter, expand and improve the competence to create new competencies by combining what they have found and transform knowledge into the company's operations (Zahra, *ibid*).

Innovation Strategy

Innovation is one of the main indicators of success of absorptive capacity activities (Indarti, N , 2010) . (Schumpeter, in Avermaete, et.all, 2003) defines innovation as:

- 1) The introduction of new products;
- 2) The introduction of new production methods;
- 3) The opening of new markets;
- 4) The opening of a new supply sources;
- 5) Run a new organization within an industry.

While (Hemert et,all, 2013) explained that the Company's ability to exploit knowledge is key to successful innovation . It is seen from the results of their study that there is a high correlation between the development of new products and services are also new processes in production and services that are the result of interaction between companies and universities, international networks are also interactions between the sales divisions with competitors.

Informal sector SME

There are some characteristics for informal business, those are:

- a) no entry barrier for skill and capital,
- b) family business,
- c) small scale,
- d) intensive work labor and use simple technology,
- e) no market competition regulation

(Bappenas,2009).

The majority of the doers behind this kind of business are house wife to be the driving force (Berthon,1996) and that occupied 60% of global workforce (Jutting and Laiglesia in Williams, 2013).

Method of Measurement

This survey use Likert scale as a tool of measurement, in a form of questionnaire. The numeric data as the answers of respondents recapitulated in a simple tabulation, and then it will be analyzed by statistical method using multiple regression. The multiple regression takes formula as follows:

$$Y = a + b_1X_1 + b_2 X_2+ b_3X_3+ b_kX_k + \xi$$

Y = a predicted value of Y (which is our dependent variable)

a = the value of Y when X is equal to zero. This is also called the “Y Intercept”.

b = The change in Y for each 1 increment change in X

X = an X score on our independent variable for which we are trying to predict a value of Y

k = is the number of variables, or parameters.

3. THE RESEARCH METHOD

Research approach

This research used quantitative approach. By conducting a survey to selected samples to answer questionnaire to get their opinions related with dimensions of absorptive capacity and innovation capability. The finding of this study will be implied to member of population, as Creswell (2014) states that from sample results, the researcher generalizes or draws inferences to the population.

Population and sample

The population in this study are all women who has small informal business in the Yogyakarta area. Meanwhile the sampling technique was done by cluster sampling, by the representation of spread across the Province of Yogyakarta which numbered 40 women. They are representative from 5 regencies: Bantul, Sleman, Kulon Progo, Gunung Kidul and city of Yogyakarta. Their business cover various business types, those are: Clothing, food, services and livestock.

Data collecting method

The research instrument used for data collection in this research used questionnaire technique by using a Likert scale of 5 (five), questionnaire was given to determined respondents. In this phase, representative of every type of business accompanied by one research team in answering questions.

4. RESULT AND DISCUSSION

Classical Assumption Test Results

Normality test

A good regression model is that if the data distribution is normal or near normal. In this study used Test One- Sample Kolmogorov - Smirnov Test, where decision-making is by looking at the probability of significance. Normality test results with the One- Sample Kolmogorov - Smirnov Test is as follows:

Table 1 Normality Test Results

Variable	P-Value	Alpha	Explanation
Unstandardized Residual	0,894	0,05	Normal

Sources: Primary data, 2016

Results One sample Kolmogorov Smirnov test showed that unstandardized residual value in this study, has a significant probability of a value greater than 0.05. It means that all variables used in this study has a normally distributed random data.

To determine a regression model free of multicollinearity, which has a value of VIF (Variance Inflation Factor) of less than 10 and have a number of Tolerance more than 0.1 . Based on the calculations showed the following results:

Table 2 Multicollinearity test

Variabel	Tolerance	VIF	Explanation
Acquisition	0,581	1,722	No Multicollinearity
Assimilation	0,778	1,285	No Multicollinearity
Transformation	0,978	1,023	No Multicollinearity
Exploitation	0,618	1,617	No Multicollinearity

Sources: Primary data, 2016

From the output above it can be seen that the value of a variable fourth Tolerance is more than 0.10 and VIF is less than 10. It can be concluded that there was no trouble multicollinearity in regression models.

Heteroscedastisity test

Glejser park test conducted by regressing between independent variables unstandardized residual value. If the value of significance between independent variable with the absolute residuals greater than 0.05 then there is no problem heteroscedasticity in regression models.

Table 3 Heteroscedastisity test

Variabel	Sig.	condition	Explanation
Acquisition	0,376	> 0,05	No Heteroscedastisity
Assimilation	0,828	> 0,05	No Heteroscedastisity
Transformation	0,925	>0,05	No Heteroscedastisity
Exploitation	0,952	>0,05	No Heteroscedastisity

Sources: Primary data, 2016

From the above it is known that the output value of the significance of all independent variables more than 0.05. It can be concluded that no problem heteroscedasticity in regression models.

F-test

Simultaneous testing done to prove the hypothesis of variable acquisition, assimilation, transformation, exploitation influence to ability of innovation variable.

Table 4 Regression Result of Acquisition Assimilation, Transformation, Exploitation to innovation performance

Variabel	β	t count	t tabel	Sig t	Explanation
Acquisition	0,675	2,531	2,021	0,016	Accepted
Assimilation	0,438	2,209	2,021	0,034	Accepted
Transformation	0,236	2,114	2,021	0,042	Accepted
Exploitation	0,614	3,700	2,021	0,001	Accepted
Konstanta	= -5,905	F count	= 18,793		
Multipel r	= 0,826	F Tabel	= 2,45		
r ²	= 0,646	Sig t	= 0,000		

Sources: Primary data, 2016

Based on the above table was obtained multiple regression equation as follows:

$$Y = -5.909 + 0.675 X1 + 0.438 X2 + 0.236 X3+ 0.614 X4$$

Based on the above table it can be seen that the F count of 18,793 with F table by 2.45. It can be concluded that the F count larger than F table (18,793> 2.45). That is sufficient evidence to conclude that the acquisition, assimilation, transformation and exploitation has a significant effect on the ability of innovation. Based on multiple r of 0.826 means that the acquisition, assimilation, transformation and exploitation has a strong relationship to the ability of innovation, since the

coefficient is in the interval (0.70 to 0.899). The value of the coefficient of determination of 0.646, means that the variable acquisition, assimilation, transformation, exploitation accounted for 64.6% of the variable innovation capability and other variables remaining constant 35.4% influenced by other variables not included in this study. There is a positive relationship between the acquisition, assimilation, transformation and exploitation on innovation capability means the correlation is strong.

T-test

The t-test was used to determine whether each independent variables significantly influence or not the dependent variable, in this case to determine whether the independent variables influence significantly or not to Dependent. Testing is done using a significance level of 0.05 by using determination:

- If $t < t_{table}$ then H_0 is accepted.
- If $t > t_{table}$ then H_0 is rejected.
- From the statistics table shows that the value t_{table} is 2,021.

The purposed hypothesis as follows:

Hypothesis 1

There is influence between acquisitions against innovation capability

Obtained from the output value amounted to 2,531 t
 T count > t table (2.531 > 2.021), it means t count larger than t table so that H_0 is rejected, H_a accepted. So we can conclude that there is significant influence between acquisitions against innovation capability

Hypothesis 2

There is influence between assimilation against innovation capability

Of output obtained t value of 2.209
 T count > t table (2.209 > 2.021), it means t count larger than t table so that H_0 is rejected, H_a accepted. So we can conclude that there is significant influence between assimilation against innovation capability.

Hypothesis 3

There is the influence between the transformation against innovation capability

Of output obtained t value of 2.114
 T count > t table (2.114 > 2.021), it means t count larger than t table so that H_0 is rejected, H_a accepted. So we can conclude that there is significant influence between transformation against innovation capability.

Hypothesis 4

There is influence between the exploitation against innovation capability

Of output obtained t value of 3.700
 T count > t table (3.700 > 2.021), it means t count larger than t table so that H_0 is rejected, H_a accepted. So we can conclude that there is significant influence between the exploitation against innovation capability

Coefficient of Determination

The coefficient of determination that shows the percentage contribution of the influence of the independent variable on the dependent variable.

Table 5 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.826 ^a	.682	.646	2.087

a. Predictors: (Constant), Eksploitasi (X4), Transformasi (X3), Asimilasi (X2), Akuisisi (X1)

The value of adjusted r -square of 0.646 means that the percentage contribution of significant influence between acquisition , assimilation , transformation and exploitation variable on innovation capability variable of 64.6 % , while the remaining 35.4 % is influenced by other variables that is not included in this research model .

5. CONCLUSION

The study shows that independent variables; acquisition, assimilation, transformation, exploitation influence significantly to innovation capability. In other word innovation capability of informal small business also influenced by external environment knowledge and skill in which the business operates. In this case how well women as the owner of informall small business can absorpt it become a crucial thing. It is very essential for facing competition among establised enterprises which is producer forced to be innovative in making new products and using new production process to have qualified end-product. This finding also very important for stakeholder to make accurate decision in upgrading innovation capability for informal small business which especially are owned by women. As we see women has different character from men, so it should be handle in defferent way as well. It can be a good issue for the following research.

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