



# Antecedent of Innovation and Marketing Performance in Batik Industry

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Batik is one of the important industries and the pride of Indonesia. Batik is a world cultural heritage which is originally Indonesia. In batik industry, innovation is one of the important factors that will improve marketing performance. This study wanted to test some of the main drivers of innovation and marketing performance on Batik SMEs. The purpose of this study is (1) Testing the influence of social capital on innovation and marketing performance; (2) Testing the effect of entrepreneurial orientation on innovation and marketing performance; and (3) Testing the influence of co-creation on innovation and marketing performance. The research sample consisted of 161 batik businesses in the city of Sragen and Purwodadi. Data were analyzed using SEM PLS and processed using WarpPLs with version 5. The results of this study indicate that only some of the hypotheses are accepted, such as (1) entrepreneurial orientation is able to significantly improve innovation, (2) co-creation is able to significantly increase innovation, (3) market capability is able to significantly improve innovation, and (4) market capability is able to significantly improve marketing performance.

**Keywords:** Entrepreneurial Orientation, Social Capital, Market Capabilities, Co-Creation, Innovation, Marketing Performance.

## 1. INTRODUCTION

Batik is one of the important industries in Indonesia<sup>1</sup> and a pride for Indonesia.<sup>2</sup> Batik is a product that is recognized by UNESCO as a cultural heritage of Indonesia.<sup>3</sup> Originally batik was just as the art of dyeing cloth and focused on the use of motifs, but in its development, batik is considered as one of the flagship product. In Indonesia, batik is well developed in several areas, such as Solo, Sragen, Pekalongan, Lasem, and several cities in Java.

Innovation becomes an important part in the SMEs,<sup>4</sup> particularly Batik SMEs. The innovation in batik industry can be in the form of batik motif development. Initially, batik motifs are mostly animals and plants. But in its development, the motif is modified into a variety of models showing that batik is a modern product. Innovations done by a business will be able to improve its performance,<sup>5-9</sup> and this is also true for Batik SMEs.<sup>1</sup> Some Batik SMEs produced only by firm order while some others made production and innovation incrementally. Thus, it can be said that the existing problems in SMEs Batik in Sragen and Purwodadi is that product innovation and marketing performance is not maximal.

The focus of this research is some antecedents of innovation and marketing performances. There are some variables that become the antecedent of innovation and marketing performances, they are: (1) entrepreneurial orientation, (2) social capital, and (3) co-creation.

The purposes of this research are:

1. To test the influence of social capital on innovation and marketing performance.

2. To test the influence of entrepreneurial orientation on innovation and marketing performance.

3. To test the influence of co-creation on innovation and marketing performance.

## 2. LITERATURE REVIEW AND HYPOTHESES

Social capital is synonymous with networks of social relations. From the standpoint of Woolcock,<sup>10</sup> social capital is defined as information, trust and norms inherent in social networking. Lin<sup>11</sup> defines social capital as a resource that is embedded in social networks accessed and used by the actors to perform certain actions. Social capital is more focused on individual characteristics in relation to social interaction they do. It is important to improve innovation<sup>12</sup> and performance.<sup>1,13</sup>

Innovation means creating new product and offering it into the market. Companies that are innovating will attempt to get their product always needed by the markets, although it is a new product. Some studies suggest that innovation done by a company is able to improve the performance of the company.<sup>5-9</sup>

Entrepreneurial orientation (EO) of a company is defined as a company involved in technology innovation, doing risky business, and pursuing proactive opportunities.<sup>14</sup> Entrepreneurial orientation will be able to increase success in innovation.<sup>5</sup> Besides affecting innovation, entrepreneurial orientation is also able to improve performance. Matsuno, Mentzer<sup>15</sup> shows that entrepreneurial orientation can improve performance.

Li, Huang<sup>16</sup> examines how entrepreneurial orientation influences working performance in entrepreneurs in Taiwan. Soininen, Martikainen<sup>17</sup> studied the influence of entrepreneurial orientation on performance (growth and profitability). The results of both<sup>16</sup> and<sup>17</sup> is positive and significant.

Joint creation is a joint participation between consumers and producers to create value in the marketplace.<sup>18</sup> Conducting a joint creation between companies and consumers will also be able to improve much innovation and marketing performance.<sup>19,20</sup> One of the dimensions of joint creation (sharing knowledge and experience) can improve innovation and performance significantly.<sup>21,22</sup>

From the above explanation, the hypotheses in this study are:

H1: Social capital can significantly improve innovation.

H2: Innovation can significantly improve marketing performance.

H3: Social capital can significantly improve marketing performance.

H4: Entrepreneurial orientation can significantly improve innovation.

H5: Entrepreneurial orientation can significantly improve marketing performance.

H6: Co-creation can significantly improve innovation.

H7: Co-creation can significantly improve marketing performance.

H8: Market capabilities can significantly improve innovation.

H9: Market capabilities can significantly improve marketing performance.

### 3. RESEARCH METHODOLOGY

The population in this study was 525 batik business in the city of Sragen and Purwodadi. Sampling technique is purposive sampling, with criteria, as follows:

- (1) the age of Batik SMEs is at least 5 years,
- (2) having network with other companies, and
- (3) having at least 10 employees.

Questionnaires were distributed to all owners of SMEs Batik, but the questionnaires given back and can be processed again is as much as 161 respondents. So the study sample was 161 batik SMEs in Sragen and Purwodadi.

Data analysis in this study used Structural Equation Modeling (SEM), in particular the SEM-PLS. SEM-PLS Model was divided into two types: the measurement model (examine the relationship between observed and latent variables) and the structural model (examine the relationship between the latent variables with latent). To process the data obtained, this study uses Warp-PLS version 5.

## 4. RESEARCH RESULTS

### 4.1. Result of Measurement Model

Reliability and validity were used to test whether the research instrument developed has been reliable or valid. In this study, reliability measurement used Composite Reliability while validity measurement used Convergent Validity and Average Variance Extracted. The requirement for Composite Reliability is that the value should be above 0.60; the requirement for Convergent Validity is that the Loading Factor value should be above 0.50; and the requirement for AVE is that the value should be

**Table I. Factor loading, AVE, and composite reliability.**

Variable and indicator	Factor loading	AVE	CR
Social capital		0.644	0.844
Relationship network	0.807		
Social network	0.854		
Social norms	0.742		
Entrepreneurial orientation		0.52	0.764
Ability to take risk	0.696		
Flexibility	0.767		
Anticipation	0.698		
Innovation		0.678	0.863
New product developing	0.784		
The development of quality products	0.835		
The development of a quality range of products	0.850		
Market capability		0.519	0.815
Environmental understanding	0.689		
Innovation creation	0.655		
Uniqueness function	0.771		
Capability	0.776		
Co-creation		0.519	0.81
Dialogue	0.833		
Access	0.743		
Risk assessment	0.622		
Transparency	0.668		
Marketing performance		0.623	0.831
Growth	0.860		
Sales	0.697		
Profit increase	0.802		

above 0.50. From Table I, it can be concluded that the research instrument used in this study has been reliable and valid. This is because the value of Composite Reliability, Convergent Validity and AVE have already been above the required value.

### 4.2. Result of Structural Model

Model fit is an evaluation of whether the data is matched with the empirical model developed in this study. Several types of model fit used in this study are Average Path Coefficient (APC), Average *R*-Squared (ARS), Average Adjusted *R*-Square (Aars), Average Block VIF (AVIF), Average Full collinearity VIF (AFVIF), Sympton's Paradox Ratio (SPR), *R*-Squared Contribution Ratio (RSCR), Statistical Suppression Ratio (SSR), and Nonlinear Bivariate Casuality Direction Ratio (NLBCDR). From the Figure 1 below, it can be concluded that the data are in accordance with the model developed for all model fit measurements have been in conformity with the requirements.

Hypothesis 1 tests whether social capital has a positive and significant influence on innovation. The results of this study indicate that social capital has a negative but not significant influence on innovation ( $B = -0.062$ ;  $p > 0.05$ ). Hypothesis 1 was rejected. The results of this study differ from previous studies.<sup>12</sup>

Hypothesis 2 tests whether innovation has a positive and significant impact on marketing performance. The results of this study indicate that innovation has a positive but not significant effect on marketing performance ( $B = 0.122$ ,  $p > 0.05$ ). Hypothesis 2 was rejected. These results differ from previous research, which explains that innovation has a positive and significant impact on marketing performance.<sup>5-7, 23</sup>

Hypothesis 3 tests whether social capital has a positive and significant impact on marketing performance. The results of this study indicate that social capital has a positive but not significant

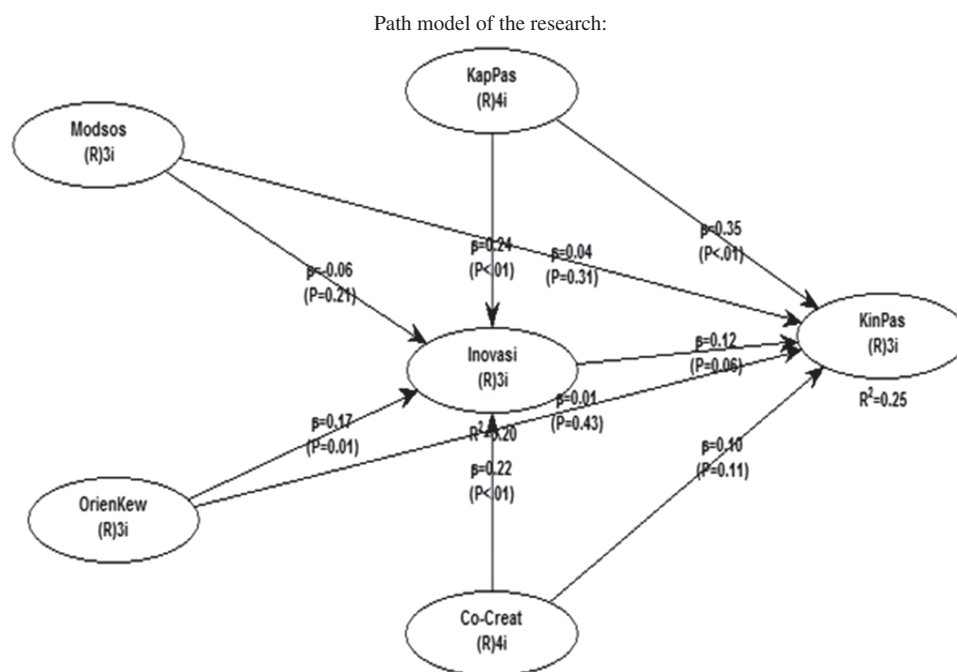


Fig. 1. Path model.

effect on marketing performance ( $B = 0.039$ ;  $p > 0.05$ ). Hypothesis 3 is rejected. The results of this study differs from previous research saying that social capital has a positive and significant impact on marketing performance.<sup>24</sup> There are two conditions that possibly make the influence of social capital on marketing performance not significant. First, individualism in this industry is still quite thick. They may have a network, but the network is not used to improve business performance. The tendency of individualism in running a business get them to consider other business as the main competitor so that the networks created are not able to improve its business performance. Second, the absence of a mature system in making social networking.

Hypothesis 4 tests whether entrepreneurial orientation has a positive and significant impact on innovation. The results of this study indicate that entrepreneurial orientation has a positive and significant impact on innovation ( $B = 0.171$ ;  $p < 0.05$ ). Hypothesis 4 is accepted. These results are similar to previous studies.<sup>5</sup>

Hypothesis 5 tests whether entrepreneurial orientation has a positive and significant impact on performance marketing. The results of this study indicate that entrepreneurial orientation has a positive but not significant effect on marketing performance ( $B = 0.013$ ;  $p > 0.05$ ). Hypothesis 5 is rejected. These

results are in contrast with previous studies.<sup>15–17,25</sup> There are some researches explaining that entrepreneurial orientation has no significant effect on performance.<sup>26,27</sup>

Hypothesis 6 tests whether co-creation has a positive and significant impact on innovation. The results of this study indicate that co-creation has a positive and significant impact on innovation ( $B = 0.218$ ;  $p < 0.05$ ). Hypothesis 6 is accepted. These results are in line with previous studies.<sup>19</sup>

Hypothesis 7 tests whether co creation has a positive and significant impact on marketing performance. The results of this study indicate that co-creation has a positive but not significant effect on marketing performance ( $B = 0.096$ ). Hypothesis 7 was rejected. These results differ from previous results, which stated that co-creation has a positive but not significant impact on marketing performance.<sup>20,22</sup> Co-creation is not a driving factor increasing marketing performance. The main function of co-creation is just to boost innovation.

Hypothesis 8 tests whether market capability has a positive and significant impact on innovation. The results of this study indicate that market capability has a positive and significant influence on innovation ( $B = 0.243$ ;  $p < 0.05$ ). Hypothesis 8 accepted.

Table II. Results of goodness of fit.

Model fit	Requirement	Result	Note
Average path coefficient (APC)	$P < 0.05$	APC = 0,146; $p = 0.015$	Model has been fit
Average R-squared (ARS)	$P < 0.05$	ARS = 0.229; $p < 0, 001$	Model has been fit
Average adjusted R-square (AARS)	$P < 0.05$	AARS = 0.207; $p < 0.001$	Model has been fit
Average block VIF (AVIF)	AVIF < 3.3	1.672	Model has been fit
Average full collinearity VIF (AFVIF)	AVIF < 3.3	1.527	Model has been fit
Sympson's paradox ratio (SPR)	SPR > 0.7	0.889	Model has been fit
R-squared contribution ratio (RSCR)	RSCR > 0.9	0.970	Model has been fit
Statistical suppression ratio (SSR)	SSR > 0.7	1.000	Model has been fit
Nonlinear bivariate casuality direction ratio (NLBCDR)	NLBCDR > 0.7	0.722	Model has been fit

Table III. Hypotheses testing results.

Hypotheses	Coefficient	Result
H1: Social capital → Innovation	-0.062	Rejected
H2: Innovation → Marketing performance	0.122	Rejected
H3: Social capital → Marketing performance	0.039	Rejected
H4: Entrepreneurial orientation → Innovation	0.171*	Accepted
H5: Entrepreneurial orientation → Marketing performance	0.013	Rejected
H6: Co-creation → Innovation	0.218*	Accepted
H7: Co-creation → Marketing performance	0.096	Rejected
H8: Market capability → Innovation	0.243*	Accepted
H9: Market capability → Marketing performance	0.353*	Accepted

Note: \*Sig < 0.05.

Hypothesis 9 tests whether market capability has a positive and significant effect on marketing performance. The results of this study indicate that market capability has a positive and significant effect on marketing performance ( $B = 0.243$ ;  $p < 0.05$ ). Hypothesis 9 accepted.

## 5. CONCLUSION

From the 9 hypotheses constructed in this study, there are only 4 hypotheses accepted, they are, Entrepreneurship Orientation on Innovation, Co-Creation on Innovation, Market Capabilities on Innovation and Market Capability on Marketing Performance. The results of this research suggest that many antecedents of marketing performance did not able to establish marketing performance. This is possible because of the imprecision in selecting marketing performance, particularly in Batik industry. It is possible that in batik industry, every business has unique performance, such as loyalty and customer satisfaction.

Limitations of this study are:

- (1) Research was confined to small areas, namely the city of Sragen and Purwodadi, so this study can not be generalized and
- (2) The business of batik is not in large scale, so that the measurement for the marketing performance of each SMEs is possibly different.

This is what might make entrepreneurial orientation, co-creation, and social capital do not have a significant influence on marketing performance. From the two limitations of this study, it is recommended the following things for future research:

- (a) analyzing innovation as an intervening variable. From the influence of social capital on marketing performance, entrepreneurial orientation on marketing performance, marketing

performance on market capabilities, and co-creation on marketing performance, it can be concluded which one is the best intervening effect of the relationship of these variables;

- (b) using the age and size of the business venture as a control variable;
- (c) testing the empirical model on two data, the city of Sragen and Purwodadi, to know whether using one model to analyze two cities will produce the same output; and
- (d) using loyalty and customer satisfaction as an indicator of performance.

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