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Strategy, Interactive Control System and National Culture: A Case Study of Batik Industry in Indonesia

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Abstract

This study investigates the national culture which moderately affects the relationship between strategy and management control system. The samples in this study are the owner and or the manager of Small to Medium Sized enterprises (SME) which have specialty of batik art in Indonesia. The study uses Structural Equation Modeling (SEM) tool with Smart PLS software as the aid. The result of this study shows that national culture moderately affects the relationship between strategy and management control system.

Keywords: Strategy, management control system, national culture and batik

1. Introduction

Batik is a special feature of Indonesia which has also been acknowledged by UNESCO as the “Intangible World Heritage” in October 2009, as well as keris and puppet. The growth of batik includes art and technology aspects which belong to former cultural heritage predated from the palace community then expanded into the outside of palace environment, and now it becomes the national culture based main industry. Batik industry is a highly creative industry, and it has developed in the period of time (Meutia, 2012). This kind of industry has been proved to be an everlasting industry which has the capability to persist and face the global economic crisis (Meutia, 2012). In today’s business environment which is characterized by the rapid changing of consumer’s preference, technology and competition, a firm needs to constantly renew its strategy so that it can persist and develop (Daneels, 2002). In order to preserve and develop a business, Management Control System is explicitly made to support a firm’s strategy (Dent, 1990). Basically, the aim of management Control System (MCS) is to supply valuable information in decision making process, planning and evaluation (Merchant and Otley, 2006). MCS is a tool to create a collective

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and individual teamwork among the units in an organization and it also becomes the channel for all effort and force which are performed by the organization to reach its specific aim (Ismail, 2012). Additionally, it occurs in batik industries which has dynamic environment (Meutia, 2012), therefore these industries need management control system to help them creating a strategy forming process.

Up to now, there have been many literatures which explored the effect of strategy on MCS. There are two lines of research which emphasize the effect of strategy on MCS. First, strategy is conceptualized on strategic option level with content approach, and the second one is conceptualized as a process. Chenhall (2005) stated that strategic content approach prone to be related with the result of strategy process. It means that this kind of approach is closely related with what a firm must do and it leads into an optimal firm’s optimal performance, in addition it also limits the view of strategy which becomes the organization’s aim. The conceptualization of MCS in this line research follows the structural approach, in which its perspective is considered as a static perspective, and it focuses on the problems such as whether there are a specific system and technical design or not.

The second line of research emphasizes the effect of strategy on MCS by conceptualizes strategy as a process approach (Roberts, 1990; Kober, et al, 2007). The conceptualization of used MCS is the usage of interactive control system, and the conceptualization of strategy is the strategy forming process. Many experts who explored the relationship between strategy forming process and MCS had also conceptualized the strategy forming process into two main parts (Chenhall, 2005). First, emergent strategy, it arises from the process or the development of strategy’s manner and it has a quick response on the occurrence of a sudden changing. Second, intended strategy, a strategy which is formulated by top management and it may be not used if a sudden changing occurs.

The result of this study has not included national culture as a moderating variables in the relationship between strategy and MCS. According to Otley (1995) MCS in an organization is influenced by contingent factor like national culture. This study is aimed to analyze and explore the relationship between strategy forming process consist of intended strategy and emergent strategy with the usage of interactive MCS which is moderated by a national culture. Moreover, the result from previous studies can not be generalized. Kober (2007) and Roberts (1990) used case study qualitative method in his study. The generalisability of this result is still limited because of many kinds of specific organization’s characteristic. The study explains the causal relationship between strategy and MCS which is moderated by national culture with quantitative method, consequently it will offer a more generalizable result.

2. Literature Review and Hypothesis Development

2.1 Strategy Forming Process

There are two kinds of independent process which works simultaneously in strategy forming process (Mintzberg, 1994; Chenhall, 2005). First, intended strategy, in its taxonomy, strategy is seen as a statement which has proactive aim and formal shape and it has been planned before a decision is made or an action is done. Intended strategy is a plan that becomes the aim of a firm and it is expected to be the most suitable action to reach the target of a firm. If the situation surrounds the firm is considered to be appropriate with the organization’s desire, the organization will use maneuver or trick and things alike to halt or threat the competitor. The basic concept of this strategy is that all the action must be planned before. In this view, intended strategy explained that there is a plan from the top until low position in a firm.

Second strategy forming process is called an emergent strategy. This strategy is the consequence of a cumulative influence from daily decisions which are made by middle manager, engineer, sales force and financial department. The decision made by them usually has tactical character, and not framed as the strategic decision. Emergent strategy is a strategy which its emergence provides response to the unpredictable external threat via trial and error.

2.2. Interactive Control System

Interactive control system is a formal system which is used by top manager in a firm to involve themselves regularly and personally in decision making process from the low until the highest part of a firm (Simons, 2000). Interactive control system is used to create any dialogues and interviews to bridge the information supply from each hierarchical level, functional department and profit center of an organization. Diagnostic control system can be made into an interactive system by continuing and continually paying attention to the interest of management. Interactive control system is used by top management to guide their strategy forming process in an informal way by implementing a personal familiarity, intimacy, or a closeness to the problem and commitment (Simons, 2000).
Strategy forming concept consists of intended strategy and emergent strategy (Mintzberg, 1994) and it is combined with Simons’ study (2000) which explores the usage of interactive control system. Simons’ study (2000) gives a theoretical and empirical support on how to use the interactive control system. Interactive control system will help an organization to communicate their strategic agenda and it will also lead the organization’s interest on probable uncertainty that may come out as result of strategy forming process. Simons (2000) said that interactive control system will help the emergence of dialogue and arguments which will evolve for a long time. Therefore, interactive control system will be adjusted itself into preplanned intended strategy and into spontaneous emergent strategy.

The change in traditional relationship between strategy forming process and MCS review have been enforced by other experts who analyzed the relationship between strategy and MCS. For example, Marginson (2002) found that managerial perception of the usage of MCS will be adjusted itself into a strategy forming process. It means that intended strategy and emergent strategy will influence MCS. Kober (2007) and Roberts (1990) also found that MCS mechanism which is interactively used, will facilitate the change occurred in a strategy.

Managers and owner who involve in batik industry management use control system by stimulating and encouraging any dialogues and interview to create an information bridge with solid Indonesia's special feature (Meutia, 2012). High competition has forced the managers of batik industry to make a proper planning. The rapid changing and developing of consumer’s preference, technology in batik design and style, however, has continually changed the planned that had made before (Meutia, 2012). Emergent strategy will show up as a response to face any changes that happened in batik industry.

Based on the explanations above, it can be developed two hypothesis as follow:

H1: Intended strategy is positively related with interactive control system.
H2: Emergent strategy is positively related with interactive control system.

2.3. National Culture

Based on contingent theory, Wiyantoro et al (2012) found that national culture is a variable that moderately affects the relationship between strategy and MCS. Hofstede (1994) stated the same opinion with Wiyantoro et al (2012). National culture is the collective programming of the mind acquired by is growing up in a particular country. (Hofstede, 1994: 262). In accordance with Hofstede’s opinion (1994), another dimensions of national culture are power distance, individualism, materialism, feminism, and uncertainty avoidance. Based on the explanations above, it can be developed two hypothesis as follow:

H3: National culture moderately affects the relationship between intended strategy and MCS
H4: National culture moderately affects the relationship between emergent strategy and MCS

To clearly describe the four variables relationship above, we can see it in figure 1. in this figure we will see that intended strategy, emergent strategy will influence to MCS. MCS used in this study is interactive control system. The relationship between the strategy formation and interactive control system will be moderated by national culture. In other words national culture will moderately affect the relationship between strategy formation and interactive control system.

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3. Methodology

Population in this study is the owner and the manager of Small to Medium Sized enterprises which specializes in batik industry in Indonesia. Based on Biro Pusat Statistik data in 2011, total population of batik industry is 43,800 industry. This kind of industry has absorbed 792,300 workers. There are 8 main provinces which produce batik, these are Jambi, Bengkulu, Jakarta, West Java, Central Java, Yogyakarta, East Java and Bali. Samples in this study are the owner and the manager of batik industry who has at least 5 years experience and 10 permanent workers. Based on the criteria above, it leaves 1,225 batik industry which meets the requirement. Data collection is done via mail survey in the early 2012. Total sent questionnaire is 1,225 items, there are 124 returned questionnaire, and 48 questionnaires which can not be used because the questionnaire is not sent to the aimed respondents, it leaves 76 usable questionnaires.

Strategy with process approach consist of first, intended strategy. Indicators to measure construct are adopted by Boyd and Reuning-Elliot (1998) as: Mission statements, Trend analysis; Competitor analysis; Long-term goal; Annual goals; Action plans on going evaluation. Second, emergent strategy, indicators to measure the construct of emergent strategy are developed from Marginson (2002) as: opportunistic strategy; bottom up strategy; intuitive strategy. Whereas the usage of MCS interactive control system, indicators developed by Simons (1995), Henri (2006) and Widener (2007) as: building a discussion in a meeting with the superior, subordinate and colleague; building a challenge and argumentation based on the data, making assumption and action planning.; giving a general view of an organization; commitment to the organization, focusing to the main problem; focusing to the succeed factor; building a general language which is easily comprehended in an organization. National culture indicators are used to measure national culture constructs which are classified by Hofstede (1994) as: power distance, individualism; collectivism; masculinism; femininism; uncertainty.

4. Results and Discussion

This study uses Structural Equation Modeling (SEM) as the data analysis, The author uses Smart PLS for SEM with moderating variable based. According to Ghozali (2008: 106), interaction approach is used to analyze data for SEM with moderating variables (multiply between moderating variable and independent variable). From data analyses with PLS the author gets result as follow (Table.1):

<table>
<thead>
<tr>
<th>Variable</th>
<th>Outer loadings</th>
<th>AVE</th>
<th>Composite Reability</th>
<th>R-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intended Strategy (IS)</td>
<td>0.706 - 0.852</td>
<td>0.612</td>
<td>0.917</td>
<td></td>
</tr>
<tr>
<td>Emergent Strategy (ES)</td>
<td>0.753 - 0.874</td>
<td>0.652</td>
<td>0.848</td>
<td></td>
</tr>
<tr>
<td>National Culture (NR)</td>
<td>0.804 - 0.861</td>
<td>0.694</td>
<td>0.932</td>
<td></td>
</tr>
<tr>
<td>Interactive Control System (ICS)</td>
<td>0.724 - 0.843</td>
<td>0.640</td>
<td>0.926</td>
<td></td>
</tr>
<tr>
<td>Int. IS*NC (moderate)</td>
<td>0.852 - 0.920</td>
<td>0.784</td>
<td>0.985</td>
<td></td>
</tr>
<tr>
<td>Int. ES*NC (moderate)</td>
<td>0.843 - 0.915</td>
<td>0.779</td>
<td>0.984</td>
<td></td>
</tr>
<tr>
<td>Interactive Control System (ICS)</td>
<td></td>
<td>0.901</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Culture which gives moderating effect on the relationship between IS and ICS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Culture which gives moderating effect on the relationship between ES and ICS</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

All variables above show that each indicator value of outer model or correlation between constructs and the whole variables has met convergent validity criteria. The above value is suit with the suggested value as 0.50 for all constructs, so there is no eliminated variable from model. And for each construct has general t-statistic value above 1.96 or t-count > t-table. It can be concluded that all variables in this study have met the requirement of model sufficiency or convergent validity. All the constructs in this study have also met the criteria discriminant validity by seeing the Average Variance Extracted (AVE) from each construct, ranges from 0.612 – 0.784. Accordingly, all constructs in this study has high reliability since AVE value in each construct is above 0.50. Seeing the results above
it can be concluded that all variable has proper composite reliability. $R^2$ value for each independent latent variable to dependent latent variable gives substantive influence, it means that independent variable can strongly explain dependent variable, so structural equation in this study is considered as a proper model. In this study, $R^2$ square value ranges from 0.773 – 0.901.

To test the proposed hypothesis, we can see the significance of t-statistic values. The margin to accept and reject the proposed hypothesis is ±1.96. Estimation result from t-statistic can be seen in result for inner weight in Table 2 which shows that intended strategy positively influences on interactive control system, and it has positive influence as 0.713 with t-statistic value as 78.070 and significant at 0.05. T-statistic value is above the critical value ±1.96, consequently H1 is accepted. The result from hypothesis testing is consistent with the result from Kober et al (2007). Emergent strategy positively affects the interactive control system and it has positive influence as 0.151 with t-statistic value as 2.787 and significant at 0.05. T-statistic value is above the critical value ±1.96, consequently H2 is accepted. The result from hypothesis testing is consistent with the result from Kober et al (2007) and Roberts’ study (1990).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Original Mean of Sub Samples</th>
<th>Standard Deviation</th>
<th>T-Statistic</th>
<th>Hipothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS -&gt; ICS</td>
<td>0.713</td>
<td>0.711</td>
<td>0.101</td>
<td>7.070</td>
</tr>
<tr>
<td>ES -&gt; ICS</td>
<td>0.151</td>
<td>0.153</td>
<td>0.054</td>
<td>2.787</td>
</tr>
<tr>
<td>Int.IS*NC -&gt; ICS</td>
<td>0.926</td>
<td>0.927</td>
<td>0.022</td>
<td>42.030</td>
</tr>
<tr>
<td>Int.ES*NC -&gt; ICS</td>
<td>0.879</td>
<td>0.884</td>
<td>0.030</td>
<td>29.489</td>
</tr>
</tbody>
</table>

National culture moderately affects the relationship between intended strategy and interactive control system, which gives positive influence as 0.926 with t-statistic values as 42.030 and significant at 0.05. T-statistic values is above the critical value ±1.96, consequently H3 is accepted. The result from hypothesis testing is consistent with contingence theory (Otley, 1995). National culture moderately affects the relationship between emergent strategy and interactive control system, which gives positive influence as 0.879 with t-statistic values as 29.489 and significant at 0.05. T-statistic values is above the critical value ±1.96, consequently H3 is accepted. The result from hypothesis testing is consistent with contingence theory (Otley, 1995).

5. Conclusion, Limitation and Future Research

Results from hypothesis testing show proves from H1 and H2 which stated that intended strategy and emergent strategy are positively and significantly influence interactive control system. Both results from H1 and H2 are appropriate with Kober’s study (2007) and Roberts’ (1990). Consequences of this result support the importance of management control system in a firm. Management control system will be adapted with the strategy implementation and strategy forming process. Therefore, the result proves that management control system must be viewed as control usage in helping the firm to reach the aim of strategy forming process and to communicate the strategic agenda. Management control system is also useful to direct the organizations’ attention in the future time. Another results from hypothesis testing also show prove from H3 and H4 which stated that national culture moderately affects the relationship between intended strategy and emergent strategy with MCS. Both results from H3 and H4 are supported by Contingency Theory (Otley, 1995).

Empirical model in this study only uses one way direction relationship between strategy process and MCS. Qualitative results from Kober et al (2007) and Roberts (1990) showed that the relationship between strategy and MCS is a mutual direction that influence each other. Therefore, it becomes the limitation of this study and it will give a chance for impending quantitative study to consider the mutual relationship between strategy and MCS.

Based on contingency theory, MCS is not only moderated by culture, it can also be moderated by another contextual variable, such as environment and technology development. In conclusion, future research can use environment and technology development as variables that moderately affect the relationship between strategy and MCS.
References


