Do Resources Contribute to Firms’ Performances? Exploring Batik Industry in Malaysia

Dewi Izzwi Abdul Manan*, Nawawi Mohd Jan**

Batik industry is one of the oldest industries in Malaysia. Even though the industry faces challenges that threaten the survival of batik firms, some of the firms manage to survive and perform well. Because the firms experience the same environmental situation, it is argued in this research that performance differences among batik firms are due to the resources and capabilities possessed. A research was undertaken to support this argument. This paper reports on the findings of the research.

Field of research: strategic management

1.0 Introduction

The industry of batik in Malaysia has been existed around the year of 1921 (Wan Hashim, 1996). Throughout the years of its existence, the industry contributes to the Malaysian economic wellbeing by first, creating jobs and business opportunities in rural areas (Wan Hashim, 1996). And second, by producing products that able to attract tourists and hence support the performance of Malaysian tourism industry (Leigh, 2000).

Firms in batik industry face two main groups of competitor. One, is the batik competitors from China and Indonesia where their batik textile penetrates Malaysian market with competitive prices (Abdul Kareem, 2007). Two, is the competitors from modern manufacturers where they imitate batik by producing machine printed textile which are more saleable (Abdul Kareem, 2009a). The stiff competition forced Malaysian batik firms to be more competitive in order to survive and perform. Based on directory provided by Kraftangan Malaysia (a government agency that is responsible to develop and promote craft industries in Malaysia), calls were made to batik firms and discovered that while there were firms that are still actively involve in batik business, there were also firms that have slowed down production and even ceased to produce batik due to several reasons including lack of resources. The performance difference among batik firms raised a question: what contributes to batik firms’ performance? Because batik

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firms experience the same environmental situation, it is argued that performance of batik firms are due to the resources and capabilities possessed.

There are many types of resources exist in a firms. In batik firms, several resources are deemed to be important to be studied are human capital, network, reputation, culture and marketing capability. Batik firms that have designers with strong human capital would enable the firms to create batik designs that able to attract the attention of customers. Good reputation can help batik firms to perform as the resource usually associated with high product quality and customer service and hence influence people to buy. Network provides batik firms connections with many entities so that they have access to various information, resources and opportunities. Culture also important for batik firms to ensure that members’ actions are guided by the values believed to contribute to the firms' success. Finally, marketing capability is important to ensure any batik products produced can be marketed and sold successfully.

In order to support the contribution of above-mentioned resources towards batik firms’ performance, empirical study needs to be conducted. However, from business perspective, studies that examine factors contributed to batik firms’ performance are lacking despite of being in an industry that have been existed for a very long time. There were papers written about batik firms and their internal factors such as production efficiency, quality, technology, human capital, product design and innovation in facing competition; but those papers were done conceptually only (Abdul Kareem, 2007; Abdul Kareem, 2009b; KamaroaZaman, 2001; Khairul Aidil Azlin, 2007; Siti Azizah, 2001). Mohd Zaki (2004) did research on batik firms but only about the problems and prospects faced by these firms. Even a book by Wan Hashim (1996) that describes Malaysian batik’s history and development, business, and operation of batik firms did not discuss much, if any about performance differences among batik firms.

Hence, a research was conducted to determine whether or not reputation, human capital, network, culture and marketing capability contribute to batik firms’ performance. Specifically, the objectives of the research were to identify whether there was a positive relationship between:
1. reputation and performance
2. human capital and performance
3. network and performance
4. culture and performance
5. marketing capability and performance
Based on the objectives, framework for the research was as below.

Figure 1: Framework

2.0 Literature Review

Resource-based view (hereafter RBV) propose that resources are the source for sustained competitive advantage and thus should be analyzed to understand performance differences among firms (e.g. Amit and Schoemaker, 1993; Barney and Clark, 2007; Fahy, 2000). However, Barney (1991) qualified that not all resources but only those that are valuable, rare, inimitable and non-substitutable enable firms to have persistent competitive advantage. A resource is valuable when it enable firm to implement strategies that improve efficiency and effectiveness (Barney, 1991), able to satisfy customers' needs (Fahy, 2001), contributes to production process (Amit and Schoemaker, 1993) and is the basis for later value creation (Sirmon, Hitt and Ireland, 2007). A resource is rare when none or few rivals have the resources (Barney, 1991). Rarity of resource can be achieved when the resource cannot be bought in the market and the resource is closely integrated into a company (Grünig and Kühn, 2005). A resource is inimitable when competing firms unable to build the same kind of resource as the firm it is imitating (Barney, 1995). A resource cannot be copied for several reasons such as due to causal ambiguity, social complexity and historical conditions (Barney, 1991; Barney and Clark, 2007). Finally, a resource is non-substitutable when the resource cannot be replaced by either similar resource or different resource but producing the same outcome (Barney, 1991).

Reputation is the perceptual representation of a firm’s past actions and future prospects that describes the firm overall appeal to all of its constituents when compared to other leading rivals (Fombrun, 1996:72). Reputation is valuable because more opportunities are opened up to firms and make operations more effective and efficient (Dowling, 2001). But reputation is not available to all firms as reputation is gained based on
comparisons with competing firms and that only few firms were given top credit (Carter and Ruefli, 2006) and thus making it rare. Reputation is also difficult to be copied because reputation is build over time (Dowling, 2001) and the drivers of reputation embedded inside a firm is associated with high degree of causal ambiguity (Roberts and Dowling, 2002). Besides being valuable, rare and inimitable, reputation also may not be substituted with other resources (Barney, 1991; Dewally and Ederington, 2006).

Due to the argument that reputation is valuable, rare, inimitable and non-substitutable, past studies were conducted to examine reputation-performance relationship. Some of these studies found evidence that support the contribution of reputation towards firms’ performance such as profit (López, 2006), organizational growth (Carmeli and Tishler, 2005) and return on assets (Deephouse, 2000). Hence, the first hypothesis for this research was:

H1: the stronger the reputation, the higher the firms’ performance

Human capital is the people’s pool of knowledge, skills and abilities in a firm (Fernández, Montes and Vázquez, 2000; Hayton, 2005; Wright, McMahan and McWilliams, 1994). In batik industry labors are used by batik firms for most of their batik production including motif drawing, stamping, brushing, dyeing, washing and drying (Wan Hashim, 1996). But, as sales are dependent on the ability of a firm to produce batik with attractive designs (Khairul Aidil Azlin, 2007), batik designers are most probably the most valuable labor in batik firms. Their human capital is valuable because their knowledge, skills and abilities would determine whether batik designs are attractive enough to influence consumers’ decision to buy (Khairul Aidil Azlin, 2007). Designers however are not easy to get (Abdul Kareem, 2007) and thus making designers’ human capital rare. In addition to being valuable and rare, designers’ human capital is inimitable. Not only designers’ knowledge and skills were acquired from experience making them very tacit in nature, difficult to be documented and taught (Khairul Aidil Azlin, 2007), but the designing knowledge also resides in the designer, products and designing process (Khairul Aidil Azlin, 2007), involving complex interactions that provides further barrier to imitation (Barney, 1991; Dierickx and Cool, 1989). Human capital cannot be substituted (Wright, McMahan and McWilliam, 1994). Technology support but not proxy labors (Yang and Fu, 2007) and thus, any technology used in batik firms can only be used to aid production and business process but not replacing designers’ knowledge, skills and ability.

The positive contribution of human capital on firms’ performance was found in the past. For example, Bartjargal (2007) found experience affect survival positively. Haber and Reichel (2007) also found significant and positive effect of human capital on both subjective and objective performance. Brush and Chaganti (1999) found that experience, education and attitudes affected net cash flow positively. Colombo and Grili (2005)’s study showed that founder’s education and experience do influenced firms’ growth. Because designers’ human capital is believed to be valuable, rare, inimitable
and non-substitutable, and there are evidence showed the contribution of human capital to firms’ performance, the next hypothesis was:

H2: the stronger the designers’ human capital, the higher the firms’ performance

Network is the connections that a firm has with other firms or individuals for social or economical purposes (O’Donnell, Gilmore, Cummins and Carsons, 2001). Its ability to provide a firm access to information referrals, resources, markets, technologies (Burt, 1992; Gulati, Nohria and Zaheer, 2000) makes a network a valuable resource that could help the firm’s effectiveness and efficiency. Network is rare because the opportunity to work together is not equally available to many firms (Ahuja, 2000). Network involves social relationships that are complex and ambiguous, which are difficult and takes time to be developed (Foss, 1999; Kali, 1999) and thus making network inimitable too. Nevertheless, network may be substituted by accumulations of other types of resources, but the substitution process takes along time and hence providing opportunity to a firm with strong network to have advantages over those that do not have strong network (Foss, 1999).

The effects of network on firms’ performance are documented in the past studies. For instance, Lee, Lee and Pennings (2001) and Stam and Elfring (2006) all found positive effects of network on firms’ performance. Hence, the next hypothesis for this research is:

H3: the stronger the network, the higher the firms’ performance

Culture is the values and beliefs held by a firm and those values and beliefs guide the behavior of firms’ members (Deshpandé, Farley and Hayton, 1993). Culture is valuable because it guides actions and synchronizes decisions (Hendrikse, 1993), which then enable a firm to implement strategies that are followed by its members. Culture is rare when its attributes are not similarly shared by other firms’ cultures (Barney, 1986). Culture is difficult to be copied because the resource is developed based on a firm’s accumulated learning and experience over a long time (Gamage, 2006; Schein, 2006) and involving complex social interactions among the firm’s members (Barney, 1991; Moran, Palmer and Borstorff, 2007). Furthermore, many factors such as history, technology, firm’s objectives, size and environment influence the creation of culture (Mullins, 2005) that are not easy to be identified making culture more difficult to be imitated. But, culture is not totally irreplaceable as there are many dimensions of culture that could create similar outcomes (Deshpandé and Farley, 2004). Fortunately, finding substitute culture is not easy (Martín-de-Castro, Navas-López, López-Sáez and Alama-Salazar, 2006) and thus allowing the firm with valuable, rare and inimitable culture to have competitive advantage.

Collectively, past studies did find support for positive culture-performance relationship (Bellasi, Kondra and Tukel, 2007; Chan, Shaffer and Snape, 2004; Deshpandé, Farley and Hayton, 1993) but findings reveals that different firm or industry may have different
cultural dimensions that affect its performance (Lee and Yu, 2001). For batik industry, because its firms need to produce products according to current market wants (Abdul Kareem, 2007), firms with culture that oriented externally would have higher performance. Thus, the next hypothesis is:

**H4:** the stronger the firms’ culture towards the market, the higher the firm’s performance

Marketing capability is the ability of a firm to deploy its resources in order to perform marketing activities so that customers’ needs can be met (Day, 1994; Chang, 1996). The capability is valuable as it enables a firm to understand and accommodate market needs (Srivastava, Fahey and Christensen, 2001), and sense rivals’ actions in advance so that actions can be taken to grab opportunities and overcome threats (Day, 1994). Marketing capability is rare because it cannot be bought but has to be developed by firms themselves (Krasnikov and Jayachandran, 2008). As for inimitability, marketing capability is difficult to be copied because it is created based on knowledge, skills and resources of a firm (Vorhies and Harker, 2000) making it causally ambiguous. Lastly, it is possible that marketing capability is irreplaceable because the capability requires the interactions of many resource, and it is quite difficult to identify any other resources that could replace marketing capability on its own that could produced the same outcome.

So, if marketing capability is valuable, rare, inimitable and possibly non-substitutable, does marketing capability affect performance? Many past studies showed that marketing capability is good for firms’ performance. For example, using meta-analysis, Krasnikov and Jayachandran (2008) found positive relationship between marketing capability and performance. Vorhies and Morgan (2005) found that using both aggregated and non-aggregated measures, marketing capability resulted positive performance. Hence, the final hypothesis for this research was:

**H5:** the stronger the marketing capability, the higher the firms’ performance

### 3.0 Methodology

#### 3.1 Sample

Batik firms are those that produce and sell batik textile, have been operating for more than 3 years and registered under Kraftangan Malaysia. 196 questionnaires were sent out to owners of batik firms in Malaysia using mail. Owners of batik firms are used as the respondents because they are the ones who involve in day-to-day production and business operations, and therefore the ones who know most about their firms. Out of the 196, only 141 questionnaires were returned, resulting 72% response rate.
3.2 Questionnaire and Measures

The questionnaire consisted of eight sections. The first two sections were used to obtain information about owners’ and firms’ backgrounds. Other sections were designed to get owners’ evaluation regarding their firms’ reputation, designers’ human capital, network, culture, marketing capability and performance.

Reputation items were adapted from Caruana and Chircop (2000). Some items were reworded, deleted or added to suit the nature of batik firms. Reputation was measured by product quality, high-priced product, batik design, customer service, business management, financial position, media coverage, sponsorship, promotion, being long in the industry, well-trained workers and environmental responsibility. The mixture of the measurements led to the strength of reputation resource possessed by batik firms.

Human capital is the pool of knowledge, skills and abilities in a firm (Fernández, Montes and Vázquez, 2000; Hayton, 2005; Wright, McMahan and McWilliams, 1994). Knowledge and skills can be measured by experience (Zhu and Cummings, 2007), formal education (Brown, Adams and Amjad, 2007) and training received (Stevenson and Jarillo, 1990). Items about experience and training were adapted from Carmeli and Tishler (2004), and the measure for formal education was adapted from Haber and Reichel (2007). Designer has another important capital that is designing capability. The item is self-developed by current researcher based on Syarief and Sunarya (2006) definition. Hence, designer’s human capital is measured by experience (2 items), design training, formal education and design capability. The mixture of these measurements leads to the strength of designer’s human capital.

Network items were adapted from Borch, Huse and Senneseth (1999). But some new items were added resulting six items to measure network. The questions were about information received (2 items), assistance, access to resources, influence on environment, and opportunities. The mixture of these measurements led to the strength of network possessed by batik firms.

Firm culture items were adapted from Deshpandé, Farley and Webster (1993). There were four types of culture being studied in which there were four items used to measure each type of culture. All of these cultures were measured against four themes: description of firm, leadership, what holds firm together and what is important for a firm. Based on expert panels’ suggestions, the wordings of items were made simpler to avoid confusion. In addition, instead of asking respondents to distribute 100 points among each item in each category, 5-point Likert scale was used.

Marketing capability items were adapted from Weewaradena (2003). Marketing capability was measured by customer service quality, promotion (2 items), sales person quality, distribution, market research, product differentiation, price, and overall marketing capability. The mixture of these measurements led to the strength of marketing capability possessed by batik firms.
Performance is measured by satisfaction of three years growth in profit, sales, production productivity and employment rate against main competitors. Production productivity is used because of its importance for batik firms’ performance (KamaroZaman, 2001; Wan Hashim, 1996), and profit and sales were used because they were commonly used by RBV studies to measure financial performance (e.g. Galbreath and Galvin, 2004; Newbert, Gopalakrishnan and Kirchoff, 2008). Employment growth is used because it indicates a firm’s success in creating job (Delmar, 2006). Subjective performance measure is used because most batik firms are not registered under companies and therefore objective data is not publicly available. Furthermore, exploratory study revealed that most owners are reluctant to give their performance data. Hence, subjective measure of performance is more appropriate (Dess and Robinson, 1984). Three years growth used to reflect the sustainability of competitive advantage because three years do represent a long term period (Daft, 2003; Robbins and Coulter, 2005).

Two control variables that are size and age of firms are added since these two factors may also affect performance (Wiklund, Davidsson and Delmar, 2003). Size is measured by the number of full time workers and age is measured by number of years of business operation.

4.0 Findings and Discussion

After the elimination of bad items, the reliability coefficients for this research were between 0.62 to 0.88, which were acceptable for exploratory study (Hair, Black, Babin, Anderson and Tatham, 2006). Content validation was done by expert panels from academicians. Regarding the convergent validity, all items were loaded more than 0.47, indicating they belong to the same construct (Hair et al, 2006). There were no perfect correlation between variables and thus discriminant validity was present (Abdul-Halim and Che-Ha, 2009).

Results from hierarchical multiple regression showed that not all resources affect performance significantly. Only reputation, market and adhocracy cultures and marketing capability contributed to firms’ performance positively and significantly. Specifically, reputation affected profit, sales and employment rate; market culture affected production productivity while adhocracy culture affected employment rate; and marketing capability affected profit and sales. Other resources had no impact on any performance measure. Therefore, only hypotheses 1, 4 and 5 were satisfied while the rest were not. As for control variables, firm’s size affects profit, sales, production productivity and employment rate positively while age of firms affected profit and sales negatively. Table 1 shows the result in which satisfaction in profit and sales growth were the dependent variables. Table 2 shows the result where satisfaction in productivity and employment growth were the dependent variables.
Table 1: Results for hierarchical regression

<table>
<thead>
<tr>
<th></th>
<th>Profit</th>
<th></th>
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<th>Sales</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
<td>SE B</td>
<td>β</td>
</tr>
<tr>
<td>Age</td>
<td>-0.028</td>
<td>0.010</td>
<td>-0.225*</td>
<td>-0.030</td>
<td>0.010</td>
<td>-0.244*</td>
</tr>
<tr>
<td>Size</td>
<td>0.589</td>
<td>0.169</td>
<td>0.287*</td>
<td>0.409</td>
<td>0.167</td>
<td>0.202**</td>
</tr>
<tr>
<td>Reputation</td>
<td>0.351</td>
<td>0.161</td>
<td>0.203**</td>
<td>0.268</td>
<td>0.159</td>
<td>0.158***</td>
</tr>
<tr>
<td>Human capital</td>
<td>-0.081</td>
<td>0.151</td>
<td>-0.050</td>
<td>0.146</td>
<td>0.149</td>
<td>0.092</td>
</tr>
<tr>
<td>Network</td>
<td>-0.161</td>
<td>0.140</td>
<td>-0.097</td>
<td>-0.113</td>
<td>0.139</td>
<td>-0.069</td>
</tr>
<tr>
<td>Clan culture</td>
<td>-0.230</td>
<td>0.272</td>
<td>-0.102</td>
<td>-0.100</td>
<td>0.270</td>
<td>-0.045</td>
</tr>
<tr>
<td>Adhocracy culture</td>
<td>0.260</td>
<td>0.311</td>
<td>0.122</td>
<td>0.177</td>
<td>0.308</td>
<td>0.084</td>
</tr>
<tr>
<td>Hierarchical culture</td>
<td>0.135</td>
<td>0.323</td>
<td>0.064</td>
<td>0.079</td>
<td>0.320</td>
<td>0.039</td>
</tr>
<tr>
<td>Market culture</td>
<td>-0.007</td>
<td>0.267</td>
<td>-0.003</td>
<td>-0.073</td>
<td>0.265</td>
<td>-0.037</td>
</tr>
<tr>
<td>Marketing capability</td>
<td>0.401</td>
<td>0.200</td>
<td>0.201**</td>
<td>0.437</td>
<td>0.198</td>
<td>0.223**</td>
</tr>
<tr>
<td>∆R² for step 2</td>
<td>0.142</td>
<td></td>
<td></td>
<td>0.159</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < 0.01; ** p < 0.5; ***p<0.1

Table 2: Results for hierarchical regression

<table>
<thead>
<tr>
<th></th>
<th>Productivity</th>
<th></th>
<th></th>
<th>Employment</th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
<td>SE B</td>
<td>β</td>
</tr>
<tr>
<td>Age</td>
<td>-0.014</td>
<td>0.009</td>
<td>-0.127</td>
<td>-0.002</td>
<td>0.010</td>
<td>-0.019</td>
</tr>
<tr>
<td>Size</td>
<td>0.269</td>
<td>0.157</td>
<td>0.146***</td>
<td>0.543</td>
<td>0.169</td>
<td>0.275*</td>
</tr>
<tr>
<td>Reputation</td>
<td>0.127</td>
<td>0.149</td>
<td>0.082</td>
<td>0.384</td>
<td>0.160</td>
<td>0.231**</td>
</tr>
<tr>
<td>Human capital</td>
<td>0.064</td>
<td>0.140</td>
<td>0.044</td>
<td>0.172</td>
<td>0.150</td>
<td>0.111</td>
</tr>
<tr>
<td>Network</td>
<td>0.006</td>
<td>0.130</td>
<td>0.004</td>
<td>0.089</td>
<td>0.140</td>
<td>0.056</td>
</tr>
<tr>
<td>Clan culture</td>
<td>-0.414</td>
<td>0.253</td>
<td>-0.204</td>
<td>-0.281</td>
<td>0.272</td>
<td>-0.130</td>
</tr>
<tr>
<td>Adhocracy culture</td>
<td>0.317</td>
<td>0.289</td>
<td>0.165</td>
<td>0.533</td>
<td>0.311</td>
<td>0.260***</td>
</tr>
<tr>
<td>Hierarchical culture</td>
<td>-0.069</td>
<td>0.300</td>
<td>-0.037</td>
<td>-0.131</td>
<td>0.322</td>
<td>-0.065</td>
</tr>
<tr>
<td>Market culture</td>
<td>0.557</td>
<td>0.248</td>
<td>0.311**</td>
<td>0.069</td>
<td>0.267</td>
<td>0.036</td>
</tr>
<tr>
<td>Marketing capability</td>
<td>0.140</td>
<td>0.186</td>
<td>0.079</td>
<td>-0.077</td>
<td>0.200</td>
<td>-0.040</td>
</tr>
<tr>
<td>∆R² for step 2</td>
<td>0.168</td>
<td></td>
<td></td>
<td>0.148</td>
<td></td>
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</tr>
</tbody>
</table>

* p < 0.01; ** p < 0.5; ***p<0.1

From the results of analysis, several deductions about resource contribution on batik firms’ performance can be made. First, consistent with findings by Deephouse (2000), Roberts and Dowling (2002) and Snoj, Milfelner and Gabrijan (2007), reputation contributed positively the firms’ financial performance. As Snoj, Milfelner and Gabrijan (2007) found, good reputation enable firms to have customers’ loyalty. This could explain the sustained in sales and profit growth. Furthermore, because people also attracted to work with highly reputed firms (Deephouse, 2000), strong reputation also leads to growth in employment rate.

Second, it seems that this research finding on culture-performance relationship is similar to Deshpandé, Farley and Webster (1993) where market and adhocracy culture were the most important culture to have impact on performance. Because market
culture is production-oriented (Deshpandé, Farley and Webster, 1993) batik firms with this type of culture were able to increase their production productivity. And because being entrepreneurial would create jobs (Morris and Sexton, 1996), batik firms with culture that oriented towards entrepreneurship (i.e. adhocracy culture) had a growth in employment rate. Third, marketing capability helped batik firms’ financial performance. This is because marketing capability allowed batik firms to understand and cater market needs (Srivastavas, Fahey and Christensen, 2001) so that sales can be generated. In addition, the capability also enables batik firms to achieve profit (Chang, 1996).

5.0 Conclusion

This research support RBV contention that each industry is unique in terms of resources-performance relationship (Barney and Clark, 2007). For batik firms in Malaysia, resources that have direct impact on firms’ performance are reputation, external-oriented culture (i.e. market and adhocracy types of culture) and marketing capability. As for designers’ human capital and network, their role in performance contribution may need further examinations. This is because designers’ human capital can only ensure batik firms producing attractive designs but not sales. Instead of direct relationship, this resource may affect performance indirectly through other resource such as marketing capability. Future research may want to study human capital and performance relationship using marketing capability as mediator. As for network, scale improvement is recommended. This is because it seems that the items used may only measured batik firms’ connections with suppliers, financial institutions and even competitors, but not with customers. Different finding may be generated if network with customers be included in network measurement. As there may be no past studies done on the contributions of resources towards performance using RBV in batik industry, this research is believed to contribute to new knowledge in understanding resource-performance relationship in an old industry, namely batik.

References


