CRAFTING THE BEST PRACTICES WITHIN MALAYSIAN JOB-SHOP TYPE MANUFACTURING SMES

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ABSTRACT

Small Medium Enterprises, the main Malaysian economic contributor are still struggle to identify the best practice concept compatible with their environment. Although lots of research conducted and the outcome suggests that appropriate best practice procedures are contingent upon company type, none of this research has tried to develop a principle or model for this sector. This paper present the conceptualize characteristics pertinent to the best practices based on literature review and in-depth semi structure interviews and observations at the selected Malaysian SMEs and could be used to craft the best practice principle for Job-shop type SMEs sector initially. The identified characteristics can be divided into four main categories; process involved, requirement to sustain, winning over competitor, and need for growth with people focus, codification, flexibility, cost, responsiveness, competitiveness, continuous improvement and waste elimination as the pertinent characteristics.

Keywords: Small Medium Enterprises, Best Practice, Job shop.

INTRODUCTION

Small Medium Enterprises, SMEs are recognized as an integral component of economic development in many countries (Carlson, Upton, & Seaman, 2006; O’Regan, Sims, & Ghobadian, 2005; and Siu, 1999). In Malaysia, the same phenomenon can be seen when SMEs played an important role in the economy. According to Bank Negara Malaysia, BNM annual report 2006 and 2007; SMEs are the major source of various economic contributions and was providing large employment opportunities. By stimulate competition, SMEs provide the platform for large companies to grow. National Productivity Corporation (2001) mentioned that SMEs take into account for more than 90 percent of the total number of firms in Malaysian manufacturing sector, while providing job opportunities as well as enhance the production of goods and services in the national economy. According to SME Corporation’s report in 2008, SMEs comprise up to 99.2% of the overall business establish in Malaysia. This figure contributes to 32% of gross domestic product (GDP) with 19% of exports and contributes for an about 56% of Malaysian employment.

The figures clearly state, promoting a viable SMEs sector is essential in the nation’s stride towards broadening the sources of growth and sustaining the growth momentum. Realizing the important roles of SMEs, Malaysian government has continuously improved the environment for financing the SMEs to put in place a comprehensive institutional framework for this segment. These included the creation of additional platforms for outreach and the provision of support and advisory services to SMEs. All these will provide essential support to advance and transform SMEs to become larger and more competitive than others (Bank Negara, M., 2011). Due to SMEs outstanding role and potentials, their development and growth has become a primary if not priority concern of the Malaysian government. The government has introduced a variety of development policies, plans and programs to help stimulate as well as strengthen the business activities of SMEs in the country.

Despite becoming the main player as country economic contributor, most SMEs still struggle to identify the best practices (BP) concept, which might lead them to the better performance. The increasing pressures from rapid changes occurring in the industrial and business environment have leading to a variety of responses among these organizations. Globalization of production and markets, the rate of technological innovation, changing in communication methods and fluctuation in consumer demand is among the factors that have increased the dynamism of the competitive environment to which organizations must respond (Mohd Yusuff, 2004). In the manufacturing sector, most of Malaysian SMEs facing difficulty when trying to adopt practices so called BP such as Just-in-Time (JIT), Total Quality Management (TQM) or Lean Production. The biggest problem...
facing by these SMEs related to the compatibility of the practices with their organizations’ culture and environment. Hashim and Hassan (2008) concluded that the pressing problems facing by Malaysian SMEs included; late delivery, lack of transportation, competition from China and India, lack of raw materials for expansion, unable to target the right market, too many regulations and procedure, changes in regulations and lack of product acceptance. In focus perspective, these base problems are generated due to practice adopted within the SMEs.

BEST PRACTICE STUDY: AN OVERVIEW

What are best practices? The term best practice (BP) merges within manufacturing strategy then entered the industrial and academic environment between early 1970s to early 1980s due to extraordinary process and product improvement shown by Japanese companies (Laugen, Acur, Boer, & Frick, 2005). Since then, the term has been commonly used among companies and academicians when discussed performance especially relating to world class manufacturing (WCM) concepts. Its achievement has become a driving force amongst industry especially the ones that wish to achieve world class competitiveness and act as benchmarking company. The term itself indicates leadership, management, operational method and approach that led to exceptional performance. Authors of WCM in the 1990’s agreed that BP will vary according to firm strategy and their general manufacturing environment.

Signal (2006) mentioned that BP is the system containing all process information on variables which critical to profitability and having their own interval. The fact is agreed by Laugen et. al (2005) when they mentioned that one of the important factors about the BP is that; it may become obsolete in the course of time. Hallencreutz and Turner (2011) when discussing the BP clear-cut models and definitions, conclude that there might not be such a thing as a single generalized BP to be found, it all subject to experiences from own point of view and each different companies might experiences different reality.

A significant body of previous research has reported positive associations between BP and SMEs performance. These studies focus on the impact of several specific practices, so called BP such as lean production and the impact on company financial performance (Abdullah, 2010; Ahmed & Hassan, 2003; Ahmed, Hj, & Taha, 2004; Al Falah, Zairi, & Ahmed, 2003; Annuar & Mohd Yusuff, 2011; Asrofah, Zailani, & Fernando, 2010; Carlson, Upton, & Seaman, 2006; Cocco & Alberti, 2010; Gurumurthy & Kodali, 2009; Hashim & Osman, 2003; Husna & Idris; Laugen, Acur, Boer, & Frick, 2005; and Mohd Yusuff, 2004). Others focus on the impact of BP on organizational performance as the whole (Arya & Lin, 2007; Boyle, Scherrer-Rathje, & Stuart, 2011; da-Silveira & Sousa, 2010; Fraser & Hvolby, 2010; and Rawabdeh, 2005). Although the positive associations result in from those researches, none of it discussed the characteristics of BP which should be acted as principles for SMEs, making Malaysian SMEs struggled to identify the BP for better performance. In order to investigate effectively what characteristics of practices are capable of contributing to competitive advantage, it is pragmatic to examine those practices in many setting as possible. As mentioned, lots of empirical studies in BP be conducted, but there still dearth of studies for an organization pursue with job shop strategy conducted in Malaysia.

The decision to study the job shop strategy manufacturing sector of SMEs is due to several reasons; firstly, the SMEs manufacturing sector is a strong contributor to the growth of the Malaysian economy (Bank Negara, M., 2011; and Hashim M. K., 2010). Secondly, SMEs remains the largest source of employment opportunities, accounting for an about 56% of Malaysian employment (Bank Negara, M., 2008). Thirdly, the continued improvement and effort by the government has put in place a comprehensive institutional for SMEs and last but not least job shop contribute to a challenges with continuous changing environment.

LITERATURE REVIEW

Literature reviews regarding BP concepts reveal an argument reflecting the terms itself; some authors begin by giving a general definition while others with a list of criteria. Todaro, (2002); cohesively divided BP into four types as explained in table 1. In Malaysian SMEs perspective, Annuar and Mohd Yusuff, (2011); discuss the term in 8 dominants; customer focus, quality, management, supply chain management, human resource development, production process, marketing strategy, and technology and innovation. They suggesting some evidence towards “Common Practice” in Todaros’ work.
Despite all arguments, most authors agreed that BP must support the aims of achieving good product design with high quality, low manufacturing cost, shorter delivery time and reliable delivery performance and customer service. Review of literature found that BP can be discuss under three locality focus: cost (Arya & Lin, 2007; Boyle & Scherrer-Rathje, 2009; Bittici, et al., 2011; Eid, 2009; and Salaheldin & Eid, 2007), customer focus (Asrofah, Zailani, & Fernando, 2010; Babu, 1999; Bartley, Gomibuchi, & Mann, 2007; Ciliberti, Groot, Haan, & Pontrandolfo, 2009; Rajakumar, Arunachalam, & Selladurai, 2005; and Singh & Garg, 2008) and process involved (Annuar & Mohd Yusuff, 2011; Boyle & Scherrer-Rathje, 2009; Hemmati & Rabbani, 2010; Talib, Rahman, & Qureshi, 2011; and da-Silviera & Sousa, 2010). Cost is defined as all monetary factors involved including labor, input price volatility and resources uncertainty (Arya & Lin, 2007; Salaheldin & Eid, 2007; and Siu, 1999). Customer focus is defined as all factors involving products or services which lead to customer loyalty such as quality or life cycle (Asrofah, Zailani, & Fernando, 2010; Bartley, Gomibuchi, & Mann, 2007; and Singh & Garg, 2008). Process involved is defined as factors of manufacturing relating to procedure, material and machine (Annuar & Mohd Yusuff, 2011; Hemmati & Rabbani, 2010; and Talib, Rahman, & Qureshi, 2011).

METHODOLOGY AND ANALYSIS

This review begins with extensive literature survey combined with in-depth semi-structure interviews and observations at the selected SMEs to gather the characteristics pertinent to the BP. The interview and observation conducted to measure the validity of literature survey focus on the owner or relevant manager comment and opinion to what mean by the term BP and how the organization categorize their practices as BP. The sampling was base on the list of manufacturing SMEs available from SME corporation web-site, access in between September 2011 to January 2012 for Terengganu and Kedah state. In order to generalize the findings, the organizations were taken randomly (Furlan, Vinelli, & Pont, 2011; and Muda, 1998). The study begins with identification of “Job Shop” type manufacturing organizations from the list available, followed by the intent letter seeking for permission to conduct the interview and observation.

The review seeks for better understanding the driver characteristics and outcomes of managers turning to certain practice in their organization base on internal or external information sources for guidance. The outcome of the review will be use to developed research framework important for identified the relationship between various characteristic pertinent to BP.

The intent letter with interview questionnaire was sent through e-mail or ordinary mail (for the organization without e-mail address) to the identified “Job Shop” type manufacturing SMEs in Kedah and Terengganu. From the total of, 131 manufacturing base SMEs in Kedah and 109 in Terengganu only 52 SMEs identified as “Job Shop” type manufacturing SMEs: 26 SMEs in both state respectively. Out of these identified “Job Shop” type SMEs, 8 were return to sender (i.e. company no longer in business, incorrect address), while only 6 willing to be interview and allowed observation to be made in their premises, another 4 only allowed observation to be made, resulting in an useable return rate of 22.7 percent (10/(52-8)). Six series of interview and observation were made between April to July 2012. Identification of these SMEs and details of the interview and observation shown in table 2.

<table>
<thead>
<tr>
<th>Identification</th>
<th>Details</th>
<th>Date of Interview/Observation</th>
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<tbody>
<tr>
<td>Company 1</td>
<td>A construction contractor base in Pendang, Kedah. More than 12 years operation with 7 permanent workers. Register contractor with “Tenaga Nasional Berhad” for wiring and electric equipment installation. Having a wide variety of operation business ranging from maintaining road-side to construction of building.</td>
<td>1st, from 13th to 15th April 2012. (1) 2nd from 25th to 27th May 2012(3)</td>
</tr>
<tr>
<td>Company 2</td>
<td>A metal base construction firm with 5 permanent staff. Workshop located at Kampung Barokhas, Kuala Nerang, Kedah. Product range from iron structure to office</td>
<td>1st; from 29th to 31st May 2012 (3) 2nd; from 22nd to 23rd June 2012.</td>
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Table 1: Types of “Best Practices” by Todaro 2002

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<tr>
<th>Bil</th>
<th>Best Practices Type</th>
<th>Explanation</th>
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<tbody>
<tr>
<td>1</td>
<td>Icon Practice</td>
<td>Practice implemented by admired companies and / or prominent executive. (If they do it, it must be best.)</td>
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<tr>
<td>2</td>
<td>Award Winning Practice</td>
<td>Practice adopted by winners of business excellence awards. (If the winner does it, it must be the best.)</td>
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<tr>
<td>3</td>
<td>Common Practice</td>
<td>Practice that have industrial wide diffusion, adoption and acceptance. (If everyone else is doing it, it must be the best.)</td>
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<tr>
<td>4</td>
<td>Anecdotal Practice</td>
<td>Practice based on anecdotal evidence and widespread success stories. (If it worked for them, it must be the best.)</td>
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<tr>
<td>Company</td>
<td>Description</td>
<td>Interview Dates</td>
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<tr>
<td>Company 3</td>
<td>A housing contractor base in Alor Setar, Kedah with 14 permanent staff. 6 years of operation and having housing development project located at Penang, Kedah and Perlis.</td>
<td>1st; from 1st to 4th June 2012 (4) 2nd; from 22nd to 23rd June 2012 (5)</td>
</tr>
<tr>
<td>Company 4</td>
<td>A 30 years old family base organization, located at Losong area, Kuala Terengganu with 6 members of staff. Main products are cushion, canvas and canopy based on customer order. (Custom made)</td>
<td>1st; from 12th to 19th May 2012. (2) 2nd; from 11th to 13th July 2012. (6)</td>
</tr>
<tr>
<td>Company 5</td>
<td>17 years of operation. Located at Jalan Dato’ Issac Kuala Terengganu. Involved in fabrication of plate number, sticker, and banner to billboard. Number of workers = 12 persons.</td>
<td>1st; from 12th to 19th May 2012. (2) 2nd; from 14th to 15th July 2012. (6)</td>
</tr>
<tr>
<td>Company 6</td>
<td>5 years old construction base company. Main office located at Padang Hiliran Kuala Terengganu. Most of the project related with oil and gas industry. Number of workers 22 persons.</td>
<td>1st, 16th July 2012. (6)</td>
</tr>
<tr>
<td>Company 7</td>
<td>A shipbuilding company located at Kuala Terengganu with 75 permanent staff. Product range from 3meter boat up to 68 meter vessel.</td>
<td>1st; from 5th to 8th June 2012. (4)</td>
</tr>
<tr>
<td>Company 8</td>
<td>Ceiling, partition and aluminium base product company. Located at Jakar Industry Estate, Cukai, Terengganu. 12 permanent staff.</td>
<td>1st; 14th July 2012 (6)</td>
</tr>
<tr>
<td>Company 9</td>
<td>Flanges, fitting and valves product company base at Miel Jakar Industrial Estate, Kemaman, Terengganu. 6 permanent staff.</td>
<td>1st; from 13th to 14th July 2012. (6)</td>
</tr>
<tr>
<td>Company 10</td>
<td>A company base at Telok Kalong, Terengganu. Construction of cabin and container with 8 permanent staff.</td>
<td>1st; from 9th to 10th June 2012. (4)</td>
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</table>

Category coding is used to identify any importance characteristic pertinent to BP. The interviewee answers were recorded verbatim, review to correct types, and the raw data for responses were transfer to Weft QDA software for analyzed. Observation data was recorded in terms of note which later analyzed to evaluate the dispersion of substantive comments across responder to provide richer, contextual information (Farris, Aken, Geert, Chearksul, & Coleman, 2011) about the true operational practices throughout the company.

**DISCUSSION**

The interview and observation were clearly indicated that most Job Shop-type manufacturing SMEs realize the importance of BP in their organization operations. These can be indicated using the organization willingness to invest in certain practice pertinent for their performance. Representative of interview answers from those managers including:

Need to be able to react quickly to market and customer request. This was driven by the changing of trend in the market. In most cases able to react to customer request indicate the ability to satisfy stakeholder, be the first choice in customer perspective, tried the best to be different from others through quality, and ability to reduce the effect of competitor strength and strategies.

Flexibility of the manufacturing process to change as part of culture in the organization in order to be more people focus, not only to be superior compare to a competitor but also to ensure the growth of the organization. Flexibility is one of the requirements to sustain, for example, the willingness to change the type of tools used in the operation will enhance organization sustainability.

Competition forced the organization to look for low cost manufacturing processes which utilize the improvement process throughout the organization. Cost was considered in all the action conducted by the organization in ensuring the expanded of their business.

As continuous improvement help to bring new products to market quickly and cost effectively, organization continuously collecting feedback from their stakeholder as part of strategic tool for company survival.

The outcome from the series of interview and observation related to practice, indicate that Job-Shop type manufacturing SMEs in Malaysia view the practice adopt to achieved three purposes; as part of the requirement to sustain, be superior than competitor and able to act as a tool for organization growth. “Requirement to sustain” occurs when the organization tends to kept their existing market, be the first choice in customer perspective. It’s reflecting a condition where the organization workers and
management tried their best to be different from their competitors through quality in their product. “Requirement to sustain” involved factors or activities such as people focus, codification, responsiveness, flexibility and waste elimination. “Winning over competitor” means the organization alert on what their competitor do. Try to duplicate it and improve more on the necessary factors. It is a process of evaluating competitor strength and how organization can reduce the effect. “Winning over competitor” also can be view as differentiation tool; an act which can distinguish organization from their competitors, held for organization survival. Factors involved were people focus, quality system, continuous improvement, responsiveness and competitive. “Need for growth” was referring to the condition where the organization having or trying to penetrate a new market segmentation or niche. This subject to the organizations activities conducted to ensure the expanded of business involving factors such as cost, people focus, competitiveness, flexibility and codification.

The initial finding through the review of previous studies by various researcher indicate that the main categories for practice adopt by the organization were influence by cost, customer focus and process involved. Cost as define by Arya & Lin, (2007); Salaheldin & Eid, (2007); and Siu, (1999) is all monetary factors involved in production processes including labor, input price volatility and resources uncertainty. This category influence activities such as waste elimination, cost reduction, absorptive capacity and ability of the organization to recorded all their activities. Employee adaptive towards practice adopt also viewed as cost influence since it will effecting their performance. Asrofah, Zailani & Fernando, (2010); Bartley, Gomibuchi & Mann, (2007); and Singh & Garg, (2008) define customer focus as the factor involving products or services leading to customer loyalty. Activities included in this category were product improvement, process complexity, quality system and responsiveness. Factor of manufacturing relating to procedure, material, man, and the machine was categorized under process involved (Annuar & Mohd Yusuff, 2011; Hemmatti & Kabbani,2010; and Talib, Rahman, & Qureshi, 2011). This category was influence by factors such as flexibility, technological, innovative, continuous improvement, complexity, compatibility, waste elimination, responsiveness and ability to document all the activities involved.

The outcome summary of the review, interview and observation can be view in the table 3.

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<th>Table 3: The Outcome Summary</th>
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<td><strong>Locality Focuses</strong></td>
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<td>Dimensions (Review)</td>
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Based on the outcome of the review, interview and observation; the authors developed the framework for analysis using process involved, requirement to sustain, winning over competitor and need for growth as the locality focus (Figure 1). The reason to drop the cost and customer focus was based on the opinion that both locality focuses are more suitable to be view as characteristic compare to category. Figure 1 shows the initial path diagram developed for the casual model. It represents the framework for analysis to check the relationship between various characteristic pertinent to BP in order to craft the BP principle among Malaysian SMEs.
CONCLUSIONS

This review and initial study tried to identify the characteristics pertinent to best practices within Malaysian SMEs. The outcome suggested that nine characteristics were pertinent to the subject under study. The nine characteristics can be divided into 4 main categories:

A) Process involved,
B) Requirement to sustain,
C) Need for growth and
D) Winning over competitor.

These categories might influence the organization in choosing or adopting their practices. An empirical study should be conducted to check the level of the relationship between the categories with practices adopt as well as characteristic with categories. A set of the hypothesis is required in order to pursue the empirical study. Accordingly, the authors identified the following six groups of hypothesis:

A) Main Group: The relationship between categories and practices adopt,
B) Group 1: The relationship between characteristics and “Process Involved”.
C) Group 2: The relationship between characteristics and “Requirement to Sustain”.
D) Group 3: The relationship between characteristics and “Need for Growth”.
E) Group 4: The relationship between characteristics and “Winning over Competitor”.
F) Group 5: The relationship between chosen characteristics and practices adopt.
Results from the empirical study hopefully will provide new theoretical grounds for viewing best practices concept and principles within Malaysian SMEs, especially Job-Shop type manufacturing base SMEs.

LIMITATIONS

This study provided a comprehensive review, observation and interview to determine characteristic reflecting practices within Malaysian SMEs. The outcomes from the observation and interview conducted have been presented in this paper. However, the study relied on a sample of Job-Shop type manufacturing SMEs in Kedah and Terengganu and consequently, an empirical study should be conducted before the result can be generalize to all manufacturing SMEs in Malaysia.

Since, this study is considered the first attempt to determine characteristics of best practices for Malaysian Job-shop type manufacturing SMEs in particular, directions for further study are suggested. Further empirical studies could be used to find out the relationship between the characteristics and categories concerning the practice adopt. Furthermore, the level of relationship between those characteristics and categories are needed in order to craft the best practice principles. On the other hand, the determine characteristics and categories must be subject to review, critique, and discussion before they could be generalize to all type manufacturing SMEs. Finally, the critical success factors should be constructed to measure the successfullness of implementations.

REFERENCES


