THE MODERATING ROLE OF PURCHASING STRATEGIC INTEGRATION (PSI) IN THE MANUFACTURING PERFORMANCE: AN OPERATIONS MANAGEMENT PERSPECTIVE

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ABSTRACT

In the recent years, a number of emerging issues are posing serious challenges to the manufacturing industry in Malaysia. Hence, these manufacturing industries faces dramatic challenges such as globalization, new competitors, high turnover, high operating cost and minimum profits. Therefore, this study is to examine the influence of purchasing strategies on manufacturing performance with moderating effect of purchasing strategic integration. Therefore, this conceptual paper indicating that Purchasing Strategic Integration (PSI) plays moderating role in creating stronger influence of purchasing strategies on manufacturing performance. Even though purchasing only plays supporting role in manufacturing organization but its strategies creates significant contribution on manufacturing performance. Hence, the manufacturing firms should emphasize on focusing in purchasing strategies mainly effective negotiation, supplier relationship and interaction; and effective cost management as drivers for their excellence performance in this uncertainty market condition. This is essential for manufacturing firms in order to remain competitive and relevant in the challenging and competitive business environment. Therefore, this paper examines the background of the study, research problem and literature review. The uniqueness of this paper focuses on the operation management perspective which is important for manufacturing industry to progress and competitive. Finally, this article maps out the conceptual model for manufacturing industry for greater performance.

Key words: Purchasing Strategic Integration, Manufacturing Performance, Operations Management.

1. INTRODUCTION

In today’s business environment, global competition has driven manufacturing firms to response to uncertainty more rapidly. Thus, emerging of world class competitors in domestic and international business creates need for organizations to revamp their processes in order to remain competitive. The fundamental goal of organizations corporate and functional level strategies is the development of sustainable competitive advantage (Hitt et al., 2007). Simultaneously, there is great deal of shifting in conventional way of thinking for business executives to eye on strategic purchasing as one of essential elements for an organization’s competitive weapon (Giunipero et al., 2006).

Core competencies are key driver for firm’s to remain competitive in current challenging market environment. Core competencies have been define by Hitt et al., (2007) as capabilities that perform as a foundation of competitive advantage for a firm against its competitors. In this case, unlikely firm to achieve core competencies in all range of functionalities as some resources and capabilities of a firm might be incompetence compare to its rivalry (Mol, 2003). Furthermore, it will be costly and wastage of resources if a firm wants to focus in all range of functionalities that the firm engages. Identification of core competencies is essential to support firm’s make or buy decision. Therefore, firm should outsource those functionalities or activities which they do not have competitive advantage (Ramsay, 2001). As a result, outsourcing creates direct link to purchasing management whereby firm need to purchase those value creating activities or functionalities from an external supplier.

History proved purchasing progress in past 150 years which divided into seven golden period of purchasing function in organizations, from 1850’s up to beginning of 21st century (Monczka et al., 2004). The evolution begins with emerging of purchasing as a separate cooperate function, continue with development of basic purchasing procedures and ideas, recognition of purchasing function in determining sources of supply, sustaining purchasing role to reduce overall product cost, revive of material management as solution to material problem inclusive sourcing, followed by globalization era where its observed the development of supply chain management and its effect on purchasing structure and behavior (Monczka et al., 2004).

Finally, in new millennium, reshaping and revolutionary of purchasing and supply chain management (SCM) to face new era of challenges in global competition plays an important role for organizations (Monczka et al., 2004). Thus, this creates paradigm of shift in the purchasing function through supply chain capabilities emerge as one of firms core competencies whereby it become a key element in organization to achieve manufacturing and business goals with development of sustainable competitive advantage (Das & Narasimhan, 2000). The tracking on evolution of purchasing revealed the way of purchasing function shift from traditionally clerical based function to a strategic focal point in an organization with more emphasize on exchanging information with top management concerning to attain best products and services through total cost, value and risk analyzing (Cousins et al., 2006; Giunipero et al., 2006). Therefore, the role of purchasing not only limited in obtaining the right material, but also covering acquisition of product in the right quantities, with right delivery time and place, from the right source and at the right market
place which been encompass as purchasing function. On average, manufacturing firms expend about 50% of their sales dollar in the purchase of raw materials, components, supplies (Janda & Seshadri, 2001) and services. This gives purchasing function tremendous potential to increase profits. Cost of purchase reduction has bigger impact in increasing the profit of an organization compared to other functional activities in an organization (Arnold & Chapman, 2004).

Purchasing plays a strategic role in a firm’s growth (Giunipero et al., 2006) and success which enhanced shareholder value (Das & Narasimhan, 2000). As cited by Janda and Seshadri, (2001) from Kiser (1976), purchasing strategies been divided into six areas which focus on negotiation, sourcing, developing and maintaining good relations with suppliers, developing suppliers, protecting the cost structure of the company and minimizing costs. Development of these elements in purchasing strategies creates path for manufacturing excellence through manufacturing priorities with key focus on quality, cost, delivery, and innovation (Das & Narasimhan, 2000). In addition to ensure the successful implementation and execution of purchasing strategies, it is important for manufacturing organization to hire purchasing professionals with high level of knowledge, abilities and skills which crucial to obtain organization goals and sustain its competitive advantage (Giunipero et al., 2006).

The literature based paper begins by exploring the background of the study, research problem and literature review that inter-relate the contribution of purchasing strategies towards manufacturing performance. As highlighted by Brookshaw and Terziovski (1997); Carter and Narasimhan (1994) research that purchasing plays a prominent role in manufacturing performance which interfaced in quality improvement and followed by innovation in new product development. These components are part of manufacturing capabilities which plays an important role on manufacturing performance. In the final section we develop the model and conclude the significant of the purchasing strategic integration as a pillar in manufacturing industry.

2. RESEARCH PROBLEM

Recent development on world economic climate creates uncertainty on business environment. Some analysis predicting the world is just at a doorstep of worst global economic turmoil which we had gone through during the period after World War I. This been added with United States openly declared that they are facing recession and announced economic stimulation package of USD 819 billion by the approval from Senate (Economic Times, 2009). In addition, various economic stimulation package been declared by many countries around the world. Even, Malaysia come up with its first RM 7 billion economic stimulation package and followed by RM 60 billion package in March 2009 (New Straits Times, 2009). Similar action occurs in other countries as well such as China, European Union, Singapore and many others with their own stimulation packages to revive their economy. Thus, this creates a necessity for manufacturing firms to look into reconstruct, restructuring and enhance their strategy to sustain the business and profitability while remain competitive in marketplace. Manufacturing firms are in tremendous pressure to save their businesses while protecting the stake holder’s interest.

After the collapse of world’s major financial institution, latest alarming news was on US automobiles manufacturing industry giants namely General Motors, Chrysler and Ford called as ‘Big Three’ seeking USD 34 Billion financial bail out from The Congress (Economic Times, 2009). In addition, it is predicted there will be more firms in pipeline to come out with similar actions across the world whereby firm approach for government financial aids to bail out in order to sail through current challenging market condition. However, Malaysian base manufacturing firms are yet to face serious financial crisis as in other parts of the world. So far, the only reactive action been taken by manufacturing firms through reduction of their work force and since October 2008 until March 2009 around 19,326 been laid off in Malaysia (The Star, 2009) and nearly 5.1 million employees lost their jobs since early 2008 until March 2009 in US (Chris, 2009). Therefore, current crisis sends signal to manufacturing firms on the precaution and early proactive measurements to save guard their firms from plunge into huge losses which eventually will lead to bagging up to government financial support or worst case winding up their business.

As a result, in order to remain competitive in current business environment will not be an easy path for business organization due to challenges needs to be face by organization with stiff competition and complexity in marketplace. Exploration on all possible avenues becomes vital for manufacturing firms to survive. Realized cost management being fundamental element in order for organization to remain profitable besides other elements such as superior quality, supply base development and innovative products. Manufacturing firms must focus to understand the element of their cost expenditure. In most of cases, manufacturing firms intend to emphasize more on their internal factor of cost element for sustaining and developing manufacturing performance.

This been observed through much attention given by researchers towards core process of manufacturing such as production control and process efficiency, and lean manufacturing outnumbered the research in support activity such as purchasing. Once, much attention been given in business downsizing whereby workforce elimination and job enlargement became norm in cost reduction activities. Later, this followed with process re-engineering by eliminating non value added activities which directly contribute to cycle time reduction. However, these actions had reached its limit as there is less room for improvement. Furthermore, most of the improvement is only possible with additional investment on Research and Development (R & D).

As highlighted in most of purchasing studies, in general firm’s expense through purchasing contributes over 50 percent of its cost for requisite products and services (Ferguson et al., 1996; Spekman et al., 1999; Janda & Seshadri, 2001; Rodriguez et al., 2006). This provides a clear guidance to manufacturing firms to focus on purchasing as a life line for sustaining the business. Furthermore, this involved very minimal investment as achievement relied on the skill of purchasing human resource. Unfortunately, most organization fails to recognize the importance and contribution of supply base management and purchasing which traditionally viewed as clerical stuff (Giunipero et al., 2006). Therefore, not much attention given in linking purchasing and cooperate strategy.
In order to overcome challenges in the context of sustaining and developing manufacturing performance, there are needs for organization to formulate and implement effective procurement strategies. As explain earlier, purchasing will contribute 50 percent reduction on expense for every dollar saving. As such, focus on purchasing strategies will provide guideline to value creation path in manufacturing performance. Looking at the purchasing as key component in organizations, the present study analyzes the importance of purchasing strategies contribution on manufacturing performance.

3. LITERATURE REVIEW

Purchasing strategy play at vital role in enriched the competencies and manufacturing performance. In the study by Das and Narasimhan (2000) illustrated about the relationship between purchasing competence and manufacturing performance discussed the role of purchasing practices on manufacturing competitive priorities. In their research, supply base optimization, buyer-supplier relationship development practices, supplier audit capability and purchasing integration been focused as four major components of purchasing practices in an organization to measure the competitive priorities consist of cost, quality, time, delivery and customer responsiveness elements.

The conceptual study by Rajagopal and Bernard (1994) on purchasing strategy revealed that it is impossible for firms to create, design, launch and produce feasible products throughout its life cycles by disregard the supply portion of material and its components. Thus, developments of strategies to identify optimum number of suppliers, development on type of relationship with suppliers, acquiring bargaining power and total cost management are key areas which need to be focus as drivers on improving the competitive position of firm (Giunipero & Peary, 2000).

Although, the significant of strategic purchasing function been acknowledged, Benito (2007) stressed that few research been done on purchasing function contribution on business performance. On the other hand, Benito (2007) also revealed that there is very limited analyzed done on the nature of purchasing capabilities and skills. The configuration of purchasing strategic and manufacturing performance is important but previous research more interested in linking macro level of purchasing function through supply chain management contribution towards business performance. Das and Narasimhan (2000) also supported that regardless of the significant contribution of purchasing competence, there are still huge portion of its function remain unexplored.

Therefore, in another research, Benito (2007) examined the purchasing strategic integration role as moderator to create effect on the relationship between purchasing efficacy and business performance. In his research, purchasing efficacy been outlined through purchasing strategic objective which encompasses its competitive priorities such as cost, quality, flexibility and delivery. Configuration of purchasing function with business strategy is crucial rather than focusing on the execution of particular purchasing practices. Thus, this study narrow down the focus of purchasing strategies influence towards manufacturing strategic goals with purchasing strategic integration role as moderator.

4. PURCHASING STRATEGIES

Basically, purchasing in a manufacturing firms make available quality raw materials, spare parts for machine and factory maintenance as well offer services for use in production daily operation of its business. Development of manufacturing sector recognized the importance for firms to engage effective purchasing strategies. Thus, in order to strife through the competitive and dynamic business environment, purchasing strategies that focusing on formulating favorable business deal with suppliers through identification and development of competitive sources for high quality as well as low cost raw materials and spare parts plus excellent services is essential for world class manufacturing firms.

As a result, this study employs four element of purchasing element which been developed by Kiser (1976) and later been modified by Janda and Seshadri (2001). Kiser (1976) study offer six purchasing strategies such as negotiation, developing and maintaining good relations with suppliers, sourcing, developing suppliers, protecting the cost structure of company and minimizing cost (Janda & Seshadri, 2001). The present research adapted Kiser’s model on purchasing strategies into four elements of purchasing strategies. Purchasing strategies in this study maintain effective negotiation and collaborative supplier relationships and interaction, while supply base management strategy subsumes the sourcing and developing suppliers in Kiser’s purchasing strategy. The effective cost management includes Kiser’s latter two strategies which is protecting the cost structure of company and minimizing cost.

5. EFFECTIVE NEGOTIATION STRATEGY

Basically, negotiation is a process involving two or more people of either equal or unequal power meeting to discuss shared or opposed interests in relation to a particular area of mutual concern. As adopted from Porter’s (1980) model by Mol (2003) bargaining power is the most apparent force associated to purchasing management. Firm’s needs to find ways to compile resources to have more bargaining power with supplier as part of sustainable competitive advantage. Bargaining power with supplier been gained as part of negotiation skills in purchasing organization. According to Giunipero and Peary (2000), influencing and persuasion, understand business condition and customer focus are fundamental for negotiation process. Effective negotiation and communication able to foster good business relationship with supply chain partners.

Ramsay (2004) noted that negotiation process is crucial of managing differences in business relationships between buyers and suppliers in supply chains. Negotiation can be break down to two major approaches. One of
the approaches is cooperative negotiation which emphasizes on win-win formula between both parties involve in negotiation process. This is genuine integrative bargaining whereby both parties assumes that all aspects of their interest been taken care well in order to maximize their cooperative value and benefit (Ramsay, 2004; Dion & Banting, 1988). Lax and Sebenius (1986) quoted cooperative negotiation approach also rebrand as value creates (Nauta & Sanders, 2000) or problem solving approach which creates trust and mutual understanding environment between both parties (Alexander, et al., 1995). Another approach of negotiation called competitive negotiation which is genuine distributive and adverse towards common understanding. This approach focus on individual interest whereby each party attempt to maximize the self gain through aggressive cost competition tactics, enforce time pressure, lack of flexibility and threatening lost of business in order to gain advantage against the other party. Thus, Janda and Seshadri (2001), cited research conceptualization from Karrass (1974) and Perdue (1992) whom viewed this negotiation process as zero-sum win-lose game. In this case there is no room for cooperative.

Negotiation is an ultimate value to implement the purchasing strategies that an organization developed. Negotiation will be used as a path to bridge the gaps between purchaser and supplier. It is important to have well developed negotiating strategy with tactics as a foundation to support that strategy. In cooperative negotiation, buyer-supplier negotiate creates win-win situation in order to decide the ways to divide and share the extended value pie (Monczka et al., 2004). In this situation effective negotiation from buyer’s point of view creates value when receiving better price than a competitor, assistance in developing new technology or product design, shorter lead time for ordering and delivering. In addition, both parties able work together to reduce waste and ultimately eliminate the hidden cost in long run. On the other hand, supplier creates value with additional volume, preferential and promising treatment for future business and lead to technical assistant from purchaser to reduce the operating cost. Eventually effective negotiation strategy should lead towards greater manufacturing competitive priorities.

6. COLLABORATIVE RELATIONSHIP AND INTERACTION STRATEGY

Building collaborative relationship with supplier is the key element in purchasing strategy. Supply chain relationship been explain by transaction cost theory, political economy theory, social exchange theory and resource dependency theory which contributed to fundamental study for behavioral dimensions of supply chain relationship (Fynes et al., 2005; Su et al., 2008; Carr & Pearson, 1999). Mark (2004) referred supporting element of buyer-supplier collaboration as cultural element which made of trust, mutuality, information exchange, openness and communication. There was empirical study done by Golicic and Mentzer (2006) on examination of relationship magnitude examined in detail how relationship magnitude in term of trust, commitment and dependence as independents variable contribute to relationship value. Relationship value had been identified as first step of quantifying measurement of relationship outcome.

Buyer able to establish great network with supplier through collaborative relationship in order to achieve cost, quality, delivery and time improvements. As a result, in order to ensure effective establishment of collaboration partnership, there is need for efficient communication at all level and information sharing for continuous improvement in relationship. Communication is the first step for supply chain member to interact, exchange view and function as information sharing platform (Bowersox et al., 2000). Communication also important to sort out valuable information through bilateral communication on timely manner to avoid buyer from left out on progress surrounding them.

Information sharing is essential in order for chain members to share and gather the information available surround them. Otherwise, outdated information would not create beneficial to neither buyer nor supplier. The shared data and information among buyer supplier are point of sales (POS) data, demand forecasts, inventory levels, delivery schedules and inventory cost (Simatupang & Sridharan, 2004). Openness and honesty in sharing the information are crucial aspect in building relationship. As for first impression, openness and honesty will be vital step in creating trust among buyer supplier. Information sharing is not merely desirable but mandatory to build effective collaborative buyer supplier relationship. High level of information sharing will warrants a close relationship between buyer-supplier.

Managing conflict built into relationship is important mechanism in collaborative interaction in order to establish mutual understanding between buyer-supplier to overcome issues. On the other hand, Ellram (1991) noted that even top management provide supportive environment to build relationship with power and latitude to make necessary decisions and commitment. In later research, Zsidisin and Ellram (2001) cited Stuart (1993) findings that supplier collaborative partnerships significantly support productivity improvement and attaining sustainable competitive advantage in marketplace. This will creates an impact on manufacturing performance in term of its competitive priorities.

7. EFFECTIVE COST MANAGEMENT STRATEGY

As highlighted by Janda and Seshadri (2001) every single percentage saving in purchasing cost can significantly contribute in saving half point in sales. This significant contribution in purchasing function required focus on total cost management as part of purchasing strategy influencing manufacturing performance. Zsidisin and Ellram (2001) identified that total cost of ownership is an important tool as a foundation for strategic cost management. In their research, they examined the cost management associate with supplier alliances in three dimensions which analyze total cost of ownership, understanding supplier cost and target costing.

As a result, the paradigm shift in cost management has shifted focus from price to Total Cost of Ownership ensuring that purchasing strategies driven to necessity on manufacturing operation. Total cost of ownership is crucial for buyer in order to analysis and assess the cost factors involved in acquisition, possession, utilize and
subsequently disposition of a product or services (Ellram & Siferd, 1998) which ultimately will lead to firm’s make or buy decision (Zsidisin & Ellram, 2001). Ellram (1995) in his study highlighted that total cost ownership interrelated with supplier relationship as this involved information sharing on factors that drives out cost. This will be the initial point for buyer to identify the gaps that need to be bridge in order to achieve the target cost which eventually leads to minimize the production cost.

Giunipero and Peacey (2000) reported that purchasing function is shifting their focus from tactical which stress on placing an order and price saving, to strategic move with more attention given on value added activities and total cost savings. Thus, as part of cost leadership strategy (Porter, 1980), manufacturing firm must align the goals with its core supplier in order to achieve significant cost reduction. Zsidisin and Ellram (2001) identified specific elements such as working out breakdowns of supplier cost structures and creates database on estimation of supplier cost structures base on market and economic environment study able to help buyer in better understanding and enhance knowledge on supplier costs. In other word, by understanding cost structure of key suppliers, buyer can use the supplier expertise and experience to generate new ideas and identify those high cost areas which need more attention to work together towards cost reduction.

Effective cost management strategy also emphasize on the development and setting up target costing. Target costing been studied by Ellram (2000) through detail analysis on process steps to achieve overall target cost and working on continuous cost improvement plan. Target cost is the point organization willing to spend on the purchase of product and services which ultimately determine the price that market willing to pay and backs out the desired profits (Zsidisin & Ellram, 2001). As a result, target costing will be focusing on firm’s product which it can produce and sell at reasonable profit supported with long term competitive advantage against the competitors’ price. Ellram (2000) stressed that target costing establish cost goal in practical approach which drive performances metrics within the organization. Thus, as a first component in target costing it is crucial to understand competitive position of an organization in order to further boost the overall competitiveness.

According to Ellram (2000) second component of strategic cost management will be focus on cost driver analysis. Cost drivers been identified through breakdown of cost element which used to explore cost reduction opportunity or process improvement. Third component in Ellram (2000) research on target costing is value chain analysis which influenced the involvement of other members of the value chain. In term engineering effort, value chain elaborates the important of design the right products at the right price during the pilot release of product.

With recent development on business environment, customer, market and competitors, demanded manufacturing firms for cost reduction which required more effort to explore the cost drivers with strategic alliances. Even though the cost analysis tools required a lot of effort but its create benefits in the long run by minimizing overall costs through improving efficiency while sustaining and enhancing firm’s performance especially in driving the manufacturing competitive priorities.

8. SUPPLY BASE MANAGEMENT STRATEGY

Basically, the important element in supply base management is determining the optimum number of supplier by purchasing for continuous improvement. Thus, organization should maintain right number of suppliers for effective management and development of its supply base. Monczka et al., (2004) outline that supply base optimization will contribute in cost, quality, delivery and information sharing improvement between buyer and supplier. Supply base optimization will be a continuous process which identifies the best suppliers in terms of number and quality.

Supply base optimization process also involve eliminating of non performance supplier which not capable to drive and achieve purchasing performance objective. Once purchasing completed the marginal supplier elimination process, they will continue to work on developing the good suppliers to best supplier. Purchasing responsibility to ensure supply base should be competent in undertaking additional assignment that contribute to performance improvement and in addition add value to buyer supplier relationship. Das and Narasimhan (2000) supported that supply base optimization is essential part of purchasing strategy which leads in minimizing the production costs and reduce transaction between buyer-supplier.

Krause has described the supplier development as “any effort by a buying firm to improve a supplier’s performance and / or capabilities to meet the buying firm’s short term and / or long term supply needs” (Krause, 1999). Its’ required substantial effort from purchasing to warrant that supplier development plan been in place to increase supplier performance and capabilities (Humphreys et al., 2004). Thus, size of supply base plays an important role in supplier development process. Dwyer et al., (1987) stressed that purchasing able to increase supplier commitment via long term orientation with single source supply. Trent and Monczka (1999) supported that large supply base will jeopardize the close interaction between buyer and supplier. Furthermore, large supply base will limited supplier involvement in new product design and development. Therefore, genuine partnership that an organization can develop should be limited due to the factor of cost of development and maintenance (Zailani & Rajagopal, 2005).

Purchasing should focus on developing close interaction with key group of qualified supplier to ensure better support to boost manufacturing performance. It feasible that selecting and doing business with qualified world class supplier will lead to advance technology and eventually lower product cost due to close relationship during the product design and development phase. Kannan and Tan (2003) identified that high performing firms gave significant priorities on selection, development and involvement of supplier as they realized the supplier roles in determining firm’s performance. Ittner et al., (1999) reported that supply base management emphasizes on few mechanism which directly related with to firms’ performance through effective cost management effort. They
highlighted that effective selection and management of supply base enable to minimize the product development cost and poor product quality of supply parts plus efficiency in production through new ideas and innovation.

Supply base management strategy is crucial in order to develop, improve and maintain its supplier's performance and competencies to fulfill manufacturer short term and long term supply requirement (Ndubisi et al., 2005). Vonderembse and Tracey (1999) research finding revealed the existence of significant relationship between supplier selection criteria and supplier involvement contributing towards manufacturing performance.

9. PURCHASING STRATEGIC INTEGRATION

Zailani and Rajagopal (2005) reveal in their study on two form of integration which are internal and external integration, normally exercise by manufacturer. Purchasing function internal integration is integration with all other internal function in an organization such as operation, sales, engineering, quality, marketing, finance, legal and environmental safety. Purchasing function plays major role in operation since it directly link in supporting operation requirement in term of raw material and services during manufacturing process. The external integration comprise the organization engagement with suppliers which focus on the extent of supplier involvement and influence in the organization decision, plus the level of cooperation and effort by supplier to cease business deal (Zailani & Rajagopal, 2005). In this case, some organization will opt to engage minimally with suppliers thus they will create relatively slight bow of integration. However, other organization might decide to widely engage with suppliers which develop greater integration level (Zailani & Rajagopal, 2005).

Benito (2007) reveal the importance of integration between purchasing function strategic plan and firms’ business strategy. The purchasing strategic elements which consider important for purchasing performance are those that mount perfectly with organization business strategy consist of manufacturing competencies. Therefore, firms’ acknowledged the importance of purchasing function in an organization and integrate it in planning process of business strategy. In addition, Benito (2007) also highlighted that purchasing strategic integration signify in facilitating purchasing function to recognize the functional competitive priorities such in manufacturing suit as finest foundation to business strategy.

Zailani and Rajagopal (2005) studied broader scope of integration in the supply chain with network creation from upstream (supplier) to downstream (customer) which contribute towards performance. In another word, purchasing plays a gate keeping role in an organization. As a gate keeper purchasing frequently gather and transmit the requirement and information to the end user, supplier and other people involved in purchasing activities (Lau et al., 2003). Kohli (1989) noted that purchasing decision demand for substantial amount of information on alternative supplier or products to fulfill organizations need due to criticality of technical elements, risk and cost factor of product or services. Thus, end user from operation team plays decision making role together with purchasing in determining products or services that fits organization requirement. Therefore, it is clear that purchasing strategies must be aligned with operation plan and manufacturing strategy in order to achieve ultimate goal in overall performance of a firm.

Purchasing strategic integration will contribute as core for some organization to attain competitive advantage. On the other hand, purchasing strategic integration able to focused on compliance and fraud prevention as decisions making on product purchase and business awarding have been made collectively with business units. Strategic integration work closely with “spend owner” as end user in truly cross functional teams. All cost expenditure and cost related factors been financial translated into individual department owner cost centre in order to reflect actual spending of the department and drill down the cost drivers. As a result, purchasing department plays an essential role in screen through the necessity of purchase requisition from end user for material and services before proceed with procurement activities as part of control procedure and maintain integrity of the organization. Therefore, this will lead to alignment strategically link the manufacturing strategic cost planning.

10. MANUFACTURING PERFORMANCE

Leachman et al., (2005), study on manufacturing performance revealed that most of the researchers evaluating manufacturing performance are sharing common understanding that need to have multiple performance measurement. Looking back on the evaluation of performance measurement before 1980s, the performance measurement process was mainly concentrated with cost accounting approach which consists of financial key performance indexes such as return on investment (ROI), profit plus earning per share (Gomes et al., 2006). However, focusing on the financial indicators alone been exposed to the critics that other non-financial indicator which contribute towards organization performance been neglected and will only lead to short term thinking.

Therefore, Gomes et al., (2006) evaluate the revolutionary of the performance measurement approaches been used by researchers in their attempt to comprehensively measured the manufacturing performance aspects. The performance measurement has been revolutionist up to the context focusing exclusively on specific performance issues by developing the precise methodologies and frameworks to address the specific problem. This been identified as problem-specific approaches which required flexibility on measurement aspects base on issues faced by organization. Dsouza and Williams, (2000) stressed on application of problem specific approaches on their research to identify the essential of processes and tasks flexibility measurement as an answer to address the market volatility and to fulfill the diverse customer needs. Gomes, et al., (2006) in their research cited Hagedorn and Cloordt, (2003); House and Price, (1991); McGrath and Romeri, (1994); Bond, (1999); use methodologies and indicators which evaluate manufacturing performance through the focus in conjunction to the organizational restructuring and changes, specific projects, business units and function such as
product development and other Research and Development (R & D) initiatives in order to create functional base measurement.

In measuring manufacturing performance elements, it is acceptable and increasing support on non-financial aspects of manufacturing performance by most researchers. Thus, in the central elements of the manufacturing performance measurement, this research focus on manufacturing competitive priorities as critical operational dimension which cater the needs for both focal point of stake holders and to address the specific problem and organizational changes in term of new product development. Competitive priorities been classified as value chain to fulfill and sustain internal or external customers satisfaction at all the time in order to maintain and increase the market share while at the same time allow other internal process to be successful (Krajewski et al., 2007).

Manufacturing strategies consist of competitive priorities which mainly focus on quality, cost, delivery, flexibility, innovation and responsiveness. Competitive priorities been widely used as part of the measurement for manufacturing strategy performance (Zeng et. al., 2008) most firms used to achieve these goals through engaging with advanced technologies and manufacturing practices such as worker empowerment, Just In Time (JIT) and concurrent engineering (Snell & Dean, 1992). However, Das and Narasimhan (2000) reported that latest development in industry comes out with new dimension which divert the focus of manufacturing strategy towards supply chain capabilities to obtain quality, cost, delivery, innovation and responsiveness goals. Zailani and Rajagopal (2005) also stressed the importance in measuring manufacturing performance through evaluating the key competitive priorities which consist of quality, delivery and flexibility. However, their measurement on performance focus only given on three elements and neglecting other competitive priorities element such as cost, innovation and customization responsiveness. Cost and new product introduction which directly relate towards the innovation and customization responsiveness, important in creating synergy in the manufacturing growth as this will eventually determine the sales of product produced.

Das and Narasimhan (2000) in their research cited Minahan (1997) study on success of supplier versatility that Pitney Bowes analyze a group of key suppliers with manufacturing expertise will be developed by manufacturing performance, future growth and new product introduction. Therefore, the competition in manufacturing industry might be within the radius of supply chain competence which consists of purchasing strategy, Vonderembse and Tracey (1999), measured the manufacturing performance in the aspect of quality, cost of production and rework, finish goods delivery and in addition consider the inventory level of work in production goods. In their study, they related supplier selection and involvement tactics impact on manufacturing performance. As a result, they highlighted that these progress in supply chain had provided opportunity to purchasing to become a significant influence in achieving manufacturing and business goals.

11. THEORETICAL FRAMEWORK

Figure illustrates the possible relationships between four elements of purchasing strategies (effective negotiation, collaborative relationships and interaction with supplier, supply base management and effective cost management) with manufacturing performance in the aspect of competitive priorities elements. The effect of the relationship been moderated by purchasing strategic integration.

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<th>Independent Variables</th>
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Fig. 1. The moderating role of purchasing strategic integration effects on manufacturing performances.

12. CONCLUSION

This section provides a comprehensive examination of literature that supports the present research with corresponding theories and propositions from earlier research. The relationship of purchasing strategies and manufacturing performance is discussed in depth to provide a better insight from previous studies on the extent of the research area. The relationship of purchasing strategic integration with manufacturing performance is also
discussed and the extent it moderate the relationship between purchasing strategies and manufacturing performance is developed.

Based on the study, the influence of four purchasing strategies (effective negotiation, collaborative relationship and interaction, effective cost management and supply base management) are importance in creating positive impact on manufacturing performance competitive priorities consists of cost reduction, quality improvement, cycle time reduction, new product introduction timeline, delivery speed and dependability plus customization responsiveness. In an increasing competitive business environment, purchasing strategic integration role as moderator is crucial in creating alignment between purchasing strategies and manufacturing performance in order to ensure purchasing function stayed in tag with strategic planning process and objective.

Finally, some of the limitations of this literature review based study his lack of empirical study. Therefore, this theoretical model need to apply in the manufacturing industry to find the suitability and significant of the model. There is a need to understand more explicitly how these models are applied. It would also seem beneficial to evaluate the models the applicability in the small medium enterprises (SMEs) and larger companies. The findings from this study also indicate that tensions exist between purchasing strategies and manufacturing performance in the manufacturing industry.

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