International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Impact Factor (2012): 3.358

An Assessment of Factors Influencing Selection of Suppliers of Raw Materials in Manufacturing Industry in Kenya: A Case of the East African Breweries Limited

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Abstract: ***Quality of a firm's products is ultimately impacted by the commitment to providing quality raw materials by suppliers. Cost/price of raw materials is directly related to the overall operation costs of the firm and its net earnings, flexible contract terms provides cushion in unwelcoming situations while geographical compatibility determines the businesses' responsiveness and scheduling of its production and operations besides key supply chain components. Suppliers' role in achieving these priorities is core as exemplified in supplier support for firm's continued improvement. The purpose of this study is to assess the key determinants accounting for selection of suppliers of raw materials among Kenyan firms. The researcher employed case study based on manufacturing firms in Kenya illustrated with Kenya Breweries Limited. Data was collected qualitative and quantitative in nature and was analyzed qualitatively and quantitatively using descriptive statistics with assistance of Statistical Package for Social Sciences (SPSS) version 17.0. The research findings were that cost/price of raw materials, parts and services, commitment to providing quality raw materials, flexibility contract terms showed the respondents' yes answer percentages of 84%, 78%, and 64% from the findings respectively influenced selection of raw material suppliers among manufacturing firms, thus making these factors critical factors for consideration in selection of raw material suppliers. The generalizability of research findings is was limited by use of case study is a set up with several manufacturing firms in which standard criteria of supplier selection is still not yet adopted by many firms. This implies need for further studies on other firms with different inventory material component needs. The implications are useful to firms establishing and implementing supplier selection policy and criteria and are thinking of adopting modern perspectives to raw materials procurement. The result can guide manufacturing firms in selecting the most appropriate supplier appraisal criteria such as commitment to quality, flexible contract terms, and cost/price of raw materials.***

Keywords: Strategy, Cost/Price of Raw Material, Flexibility, Quality, EABL

1. Introduction

Some criteria that have been authored have been difficult to apply for an industry due to complexity, dynamic business environments, multi-criterion nature and lack of consistency, hence a need to assess how cost/price of raw materials, commitment to quality supplies, and supplier flexible contract terms influence supplier selection.

In manufacturing entities the cost/price of raw materials and the components elements constitute the major cost of the final product, more often accounting up to 70% of the product cost (Ghodsypour and O'Brien, 1998). Such situations calls for prudent decision making in terms of the operations of the purchasing function of an entity since supplier selection as one of its functions contributes to the success of any manufacturing entity (Liu and Hai, 2005).Any organization that desires to successfully compete in the marketplace must focus on customer requirements. These requirements can be numerous even for a narrow customer segment. An organization must translate customer requirements into objectives for operations, otherwise known as competitive priorities namely reasonable cost, consistent quality, flexibility and reliability (Hayes and Wheelwright, 2003). Supplier selection is the process by which the buyer identifies, evaluates, and contracts with suppliers with a view of optimizing the returns from such contractual relationship for the benefit of the entity and other stakeholders (Lummus, 2004).

2. Objectives of the Study

The study endeavored to assess how cost/price of raw materials influence selection of suppliers of raw materials in manufacturing industry; determine how commitment to provision of quality of supplies and how flexibility of supplier contract terms influences selection of suppliers of raw materials in manufacturing industry.

3. Literature Review

3.1 Cost / Price of Raw Materials

Cost/Price of raw materials is a function of the total outflows of an industry's resources in making the raw material available for production purposes. The total cost of raw materials includes the price of the raw materials, transaction settling costs, transportation and delivery costs up to the point of production. The cost of raw materials has implications on the industry's budget provision and the overall performance of the industry making it a key parameter of consideration in selection of suppliers of raw materials.

Several strategic management researchers have also questioned the competitive strategy model's assertion that differentiation particularly on high quality and low cost should not be pursued simultaneously. Hayes (2003) stated that each genetic strategy is composed of three dimensions. These are efficiency (the degree to which inputs per unit of output are low; differentiation the degree to which the product or its enhancements are perceived as unique; and scale/scope the relative size and range of activities of the business within its industry. Essentially, a new element should be added to a supply chain whenever it gives a net benefit – which means that it either adds value by doing work that customers are prepared to pay for, or else it reduces costs (Christopher, 1996).

According to LaLonde, Ginter, and Stock (2007), inventory levels, not transportation costs, drive supply chain savings. For most manufactured products, transportation is only two to five percent of total cost. In contrast, raw materials, components, and subassemblies typically constitute 55 to 75 percent of total cost. This reality helps explain why large cost savings result from complete supply chain solutions that reduce raw material and finished goods inventories. Actual experience in managing supply chains highlights the strong correlation between total supply chain costs and inventory carrying costs.

The 2001 Logistics Cost Survey conducted by Herbert W. Davis found that "the difference between the 20 percent of companies that reduced cost and the 50 percent that had an increase was almost fully explained by the inventory level performance. Although all manufacturers are concerned to some degree with cost, most do not compete solely or even primarily on this basis. Manufacturing cost-related categories include direct production costs, productivity, capacity utilization, and inventory reduction. Individual survey items measure the importance that respondents place on each of these cost categories.

Porter (1980) goes ahead to explain that the second general issue concerns the choice of price or cost measure used. As for industrial countries, there are basically three sorts of measures in common use: those based on unit labour costs in manufacturing industry; those based on consumer prices and those based on export unit values.

Hayes (2003) observed two weaknesses in the competitive strategies model. First, many industries do not have a unique low cost position. This is particularly true of mature industries, where most firms have already achieved minimum-cost structures. In these industries, firms which also differentiate are rewarded by superior economic performance because their products will have more value, thus establishing a sustained competitive advantage in these industries may require a firm to simultaneously pursue both low cost and differentiation competitive advantages.

Hill (2004) also demonstrated that differentiation can be a means to achieve an overall low cost, position. Although the immediate effect of differentiation may be to increase unit costs, there is frequently a long-run reduction of cost as demand for more valuable product increases, due to learning effects and economies of scale and scope. The ability of differentiation to help achieve a low cost position depends on two additional factors: the extent to which differentiation significantly increases demand, shifting the demand curve to the tight; and the extent to which significant reductions in unit costs arise from the increasing volume, which generally occurs for any type of manufacturing. Thus, when a firm follows a differentiation strategy, it may often also achieve a lower cost position.

3.2 Commitment to Providing Quality Raw Materials

According to Garvin (2002), a product's quality entails its durability and reliability, as well as its aesthetic effect. In many industries, customers will not accept quality below standard levels, either because of safety concerns, as in automobiles and airplanes, or the high cost of downtime, as in business telecommunications equipment. In other industries, there is significant room for a moderate quality producer. The concept of quality includes not only the product and service attributes that meet basic requirements, but also those that enhance and differentiate them from competing offerings. However, not every firm needs to compete along the same dimensions of quality.

Engineering, marketing, and manufacturing functions have often been portrayed as possessing different definitions of quality. Garvin (2002) clarified the different points of view by suggesting an eight-dimensional framework; performance, features, reliability, conformance, durability, serviceability, aesthetics, and perceived quality. Manufacturing traditional observance of quality control reflects a focus on the conformance dimension of and is more removed from the knowledge base of the responding manufacturing executives (Lysons, 2007).

Quality link to profitability does not mean that the firm should design the highest performance level possible (Jobber, 2007). There are diminishing returns to ever increasing performance. The manufacturers must design a performance level appropriate to the target market and competitor's performance levels. A company must also manage performance quality through time. Three strategies available, the first where the manufacturers continuously improve the product often produces the highest returns and market share. The second strategy is to maintain product quality at a given level. Many companies have left their quality unaltered at its initial formulation unless glaring faults or opportunities occur. The third strategy is to reduce product quality through time, some companies cut quality to offset rising costs while others reduce quality deliberately in order to increase current profits although this course or action often hurts long run profitability.

Lysons (2007) asserts that quality products enable the organization gain popularity and large market share. Market share analysis evaluates a company's performance in comparison to that of its competitors. Sales analysis may sow a healthy increase in revenues but this may be due to market growth rather than can improved performance over competitors. It should be recognized

that a market share decline is not always a symptoms of poor performance.

3.3 Flexible Contract Terms

Flexibility of supply contract terms refers to the ability to cope with environmental uncertainties with minimal resource outflows in terms of cost or performance (Upton, 1994). Flexibility seeks to enable an industry to deal with uncertainties in supply sources, product or process life cycles, supplier deliveries or operation disruptions, and consumption patterns(Vokurka and O'Leary Kelly, 2000). According to Gerwin (2009) there are seven dimensions of flexibility. Individual survey items measure the importance of the first four of Gerwin's dimensions of flexibility; product mix, volume, changeover, and modification. The final three flexibility dimensions (rerouting, material, and sequencing) are not included because they require detailed explanations, which are beyond the scope of this research effort.

It is generally agreed that supply contract flexibility does not refer to a single variable, but rather is a multi-dimensional construct. Vokurka and O'Leary-Kelly (2000) expanded the dimensions of manufacturing flexibility developed by Browne et al., (2002) and (Sethi and Sethi, 2002). These included machines, material handling, operations, automation, labor, process, routing, product, new design, delivery, volume, expansion, program, production, and market flexibility. Further, they suggested a contingency relationship between manufacturing flexibility and firm performance. In their examination of past studies, they found four general forces strategy; environmental factors, organizational attributes, and technology were the dominant ones influencing manufacturing strategy.

D'Souza and Williams (2000) highlights the essence of flexibility by manufacturing concerns. They argue that flexibility can take two dimensions; externally driven flexibility and internally driven flexibility. Reasonable emphasis should be given to both flexibility, however more concern on external flexibility dimensions such as volume flexibility, variety flexibility, process flexibility, and materials handling flexibility should be strengthened due to their impact on customer perceptions hence industry performance. This can be exemplified by Koste and Malhotra (2004) who focused their study on the elements in determining if they could be used for measuring the different dimensions of manufacturing flexibility.

The hierarchy of flexibility dimensions as proposed by Koste and Malhotra (2004) supports the argument that much of the focus on flexibility concentrates on flexibility within a single plant. They developed a tiered perspective beginning at the top with strategic flexibility and moving down through functional, plant and shop floor flexibility, and finally to individual resource flexibility. The lower three tiers; plant, shop floor, and individual resources have a single plant internal focus. Not until reaching the fourth level was there recognition that flexibility for the business unit is actually a combination of flexibility in many functional areas. However, when reviewing the attempts by Koste and Malhotra (2004) and D'Souza and Williams (2000) to measure a dimension of flexibility, it may be argued that the measurements overlap in multiple functional areas.

According to Lummus et al., (2005) volume flexibility refers to the ability to quickly and efficiently adjust output to match demand. Having a wide range of volume for which a plant can operate efficiently as measured by production costs, quality levels, or system profitability indicates a high level of flexibility. Similar discussions can be included for the dimension of product flexibility. Product flexibility has been defined as the ability of the plant to introduce new products or modify existing products, thus focusing on plant flexibility.

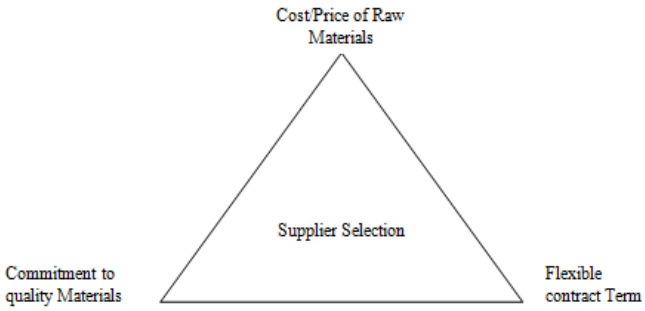

Figure 1: Conceptual Model Relating Supplier Selection Criteria
Source: (Researcher, 2014)

4. Theoretical Literature

As firms are led to utilize information and knowledge in a complex environment, they often do not act on their own. Besides, alliances between direct competitors set the trend. Indeed, horizontal inter-firm ties have grown in the shape of, partnerships, agreements, and mostly alliances. Synonymous with cooperative competition, competition is the art of competing and cooperating simultaneously with partners, including direct competitors (Brandenburger and Nalebuff, 2006). Moreover, competition fosters information and knowledge sharing, since competitors access immaterial resources in an interactive way, due the network structure of modern organizations.

4.1 Theory of Strategic Balancing

Strategic balancing is based on the principle that the strategy of a company is partly equivalent to the strategy of an individual. Indeed, the performance of companies is influenced by the actors' behavior, including the system of leaders' values. Further to an empirical study on technological alliances, Aliouat deduced the principle of the strategic balancing according to which a technological alliance generates paradoxes and lives by its paradoxes. An alliance wavers between multiple antagonistic poles that represent cooperation and competition. This gives room to various configurations of alliances, which disappear only if the alliance swings towards a majority of poles of confrontation (Aliouat and Boualem, 1997).

The strategic balancing gathers three models, namely the relational, symbiotic and deployment models. Competition

proves to be part of the relational model and the model of deployment. It can be subject to alternation between the two antagonistic strategies, the one being predominantly cooperative as described by the relational model and the other being predominantly competing as characterized by the model of deployment. The company can then take turns at adopting the two strategies in order to keep their alliance balanced. This idea is very close to that of Bengtsson and Kock (2000) according to whom there are three types of competitive relationships: competition-dominated, cooperation-dominated, and equal relationships. The latter is similar to the alternation between the relational model and the model of deployment described by (Aliouat, 2006).

4.2 Ansoff Growth Matrix Theory

The Ansoff (1957) Product-Market Growth Matrix is a marketing tool created by Igor Ansoff. The matrix allows managers to consider ways to grow the business via existing and/or new products, in existing and/or new markets – there are four possible product/market combinations. This matrix helps companies decide what course of action should be taken given current performance. The matrix consists of four strategies; Market penetration (existing markets, existing products): Market penetration occurs when a company enters/penetrates a market with current products. The best way to achieve this is by gaining competitors' customers (part of their market share). Other ways include attracting non-users of your product or convincing current clients to use more of your product/service, with advertising or other promotions (Hill and Jones, 2001).Product development strategy where a firm with a market for its current products might embark on a strategy of developing other products entering to the same market. Frequently, when a firm creates new products, it can gain new customers for these products. Hence, new product development can be a crucial business development strategy for firms to stay competitive (Aliouat and Boualem, 1997).

Market development (new markets, existing products). An established product in the marketplace can be tweaked or targeted to a different customer segment, as a strategy to earn more revenue for the firm. Diversification results in the company entering new markets where it had no presence before. It usually requires new skills, new techniques, and new facilities. As a result it almost invariably leads to physical and organizational changes in the structure of the business which shows a distinct break with past business experience (Postrel and Steven, 2000).

The matrix illustrates, in particular, that the element of risk increases the further the strategy moves away from known quantities - the existing product and the existing market. Thus, product development (requiring, in effect, a new product) and market extension (a new market) typically involve a greater risk than `penetration' (existing product and existing market); and diversification (new product and new market) generally carries the greatest risk of line, for this reason, amongst others, most marketing activity revolves around penetration. Grant (2000) argues that the Ansoff Matrix, despite its fame, is usually of limited value - although it does always offer a useful reminder of the options which are open.

4.3 Supply and Demand Theory

The theory behind the supply and demand model is contingent on the idea that in a free market economy, the amount of an item that the producer supplies and the amount that the customer demands both depend on the item's market price. According to the law of supply, supply and price are proportional – the higher an item's price, the more will be supplied by the producer. According to the law of demand, demand is inversely proportional to price – so the higher an item's price, the less demand there will be among customers. Hence, both supply and demand vary according to the price (Brandenburg and Nalebuff, 2006).

Economic theory holds that demand consists of two factors: taste and ability to buy. Taste, which is the desire for a good, determines the willingness to buy the good at a specific price. Ability to buy means that to buy a good at specific price, an individual must possess sufficient wealth or income. Both factors of demand depend on the market price. When the market price for a product is high, the demand will be low. When price is low, demand is high. At very low prices, many consumers will be able to purchase a product. However, people usually want only so much of a good. Acquiring additional increments of a good or service in some time period will yield less and less satisfaction (Gillingham, 2000).

Willingness and ability to supply goods determine the seller's actions. At higher prices, more of the commodity will be available to the buyers. This is because the suppliers will be able to maintain a profit despite the higher costs of production that may result from short-term expansion of their capacity (Porter, 1980). In a real market, when the inventory is less than the desired inventory, manufacturers will raise both the supply of their product and its price. The short-term increase in supply causes manufacturing costs to rise, leading to a further increase in price. The price change in turn increases the desired rate of production. A similar effect occurs if inventory is too high.

The market price of a good, according to supply and demand, should be at the intersection of customer demand and producer supply. So if an item's price is at a low level, then there will be more demand for the item than the producers are able to supply; thus, this will result in a shortage, so customers will be willing to pay more for the item. This enables the producers of the item to raise the price until it gets to the point where the customers are no longer willing to pay that much for it.

5. Research Methodology

The study adopted the use of descriptive survey design. Cooper (2000) states that a descriptive study is concerned with finding out who, what, where and how of a phenomenon, which was the concern of this study. It also employed a case study design, which is an in-depth

investigation of an individual, institution or phenomenon (Mugenda and Mugenda, 2003). The primary purpose of a case study is to determine factors and relationships among other aspects that have resulted in the behavior under study. Since the study sought to assess factors influencing selection of suppliers of raw materials in manufacturing industry, then a case study design was deemed the best design to fulfill the objectives of the study

6. Findings

6.1 Cost/Price of Raw Materials

The findings indicated that majority of the respondents (76%) representing a great extent on the likert scale said that cost/price of raw materials influence selection of suppliers of raw materials while respondents represented by a 23% and 21% on a likert scale said that cost of raw materials influenced selection of suppliers of raw materials by a very great extent and moderate extent respectively.

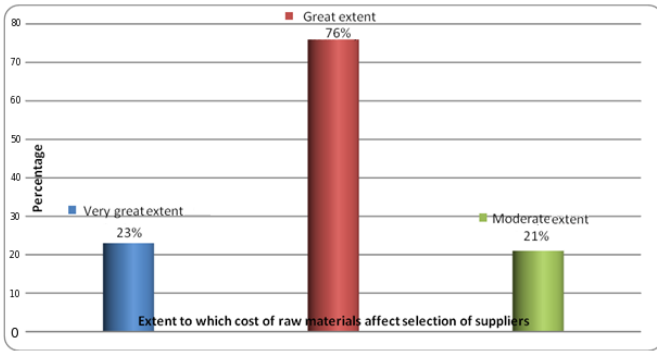

Figure 2: Extent to which cost/price of raw materials affect supplier selection

6.2 Commitment to Provision of Quality Raw Materials

Majority of the respondents (78%) agreed that quality of raw materials influence selection of suppliers of raw materials in manufacturing industry while 22% of the respondents disagreed. The findings are as illustrated in figure 4.6 in the below.

6.3 Whether Quality of Raw Materials Influence Selection of Suppliers

The study further investigated the extent to which quality of raw materials influence selection of suppliers of raw materials. The respondents were requested to rate their response on a five-point Likert scale where 1 = No extent, 2= Less extent, 3= Moderate extent, 4= Great extent and 5= respondents

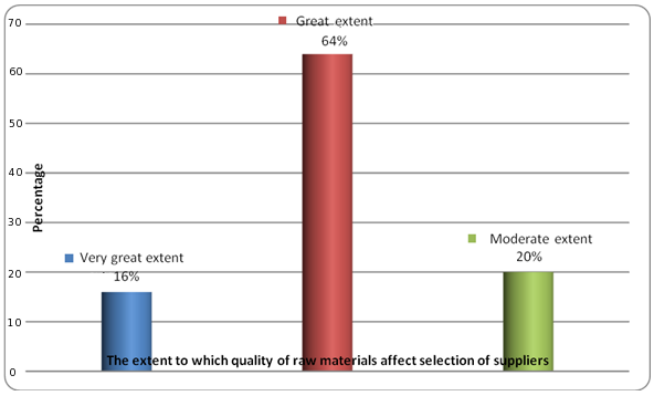

Figure 3: Commitment to provision of quality raw materials and supplier selection

(64%) said that the quality of raw materials influence selection of suppliers of raw materials to a great extent while 20% and 16% of the respondents said that the quality of raw materials influence selection of suppliers of raw materials in a moderate extent and very great extent respectively.

The respondents were requested further to indicate the extent to which the various aspects of quality influence selection of suppliers of raw materials in manufacturing industry. The response was rated on a five-point Likert scale where 1= Strongly disagree, 2 = Disagree, 3= Neutral, 4= Agree and 5= Strongly agree and the mean and standard deviation were calculated as illustrated in table 4.2 in the next page. Majority of the respondents agreed that efficiency in service provision influence selection of suppliers of raw materials (M=4.008, S.D. =0.658), technical durability influence selection of suppliers of raw materials (M=3.914, S.D. =0.699), value for money as an important measure of quality influence selection of suppliers of raw materials (M=3.773, S.D. =0.745) while perceived quality influence selection of suppliers of raw materials (M=3.938, S.D. =0.637).Implying that efficiency in service provision ranked 1st, followed by perceived quality, technical durability and value for money in 2nd, 3rd and 4th respectively in terms of quality aspects influencing selection of raw material suppliers.

6.4 Flexibility of Supply contract terms

The respondents were requested to indicate whether the flexibility of supply contract terms influence selection of suppliers of raw materials. Majority of the respondents (64%) agreed that flexibility of suppliers influence selection of suppliers of raw materials while 36% of the respondents disagreed. The findings are illustrated in figure 4.8 below.

The respondents were requested further to indicate the extent to which the various aspects of flexibility influence selection of suppliers of raw materials in manufacturing industry. The response was rated on a five-point Likert scale where 1= Strongly disagree, 2 = Disagree, 3= Neutral, 4= Agree and 5= Strongly agree and the mean and standard deviation were calculated as illustrated in table 4.3 in the next page. Majority of the respondents agreed

that flexibility affect output quality in selection of suppliers of raw materials (M=4.031, S.D. =0.601), introduction of new products affect selection of suppliers of raw materials (M=3.836, S.D.=0.740) while product modification is a measure of selection of suppliers of raw materials (M=3.773, S.D.=0.678).Implying flexibility on output ranked 1st,followed by new product introduction and product modification in 2nd and 3rd respectively in terms of flexibility aspects influencing selection of raw material suppliers.

Regarding flexibility of the supply contract terms, the respondents further said that the company considers the ability of the suppliers to offer different varieties of raw materials required for specified products. The supplier should be able to provide different volumes of raw materials as required by the company. This important due to fluctuations in demand and supply which dictates the amount of raw materials required for production. The supplier should also be able to supply raw materials within short notice if there is urgency in the use of such raw materials. This will be highly convenient in ensuring that there are no delays in the production process. Flexibility therefore plays a major role in selection of a suitable supplier for raw materials in manufacturing industry.

7. Conclusions

The study concludes that the cost/price of raw materials is a major factor in selection of suppliers of raw materials. Companies opt for suppliers who offer the required raw materials at reasonable price. The transaction cost, the expenses incurred in transporting and delivering raw materials should be minimized to reduce the overall cost of purchasing raw materials. Costs such as transportation cost, production cost, operating cost and profit are considered during selection of suppliers of raw materials.

Regarding the influence of commitment to provision of quality raw materials on selection of suppliers the study concludes that companies prioritize the quality of raw materials during selection of suppliers. The suppliers who provides high quality raw material are always given preference in selection by manufacturing entities. Efficiency in service provision, perceived quality, durability and value addition, additionally are considered during the selection of suppliers of raw materials.

With respect to flexibility of supply contract terms, the study concludes that companies consider flexibility during selection of suppliers of raw materials. Flexibility affects output quality in selection of suppliers of raw materials. Introduction of new products and product modification influences selection of suppliers of raw materials. Companies consider the ability of the suppliers to offer different varieties of raw materials required for specified products. The supplier should be able to provide different volumes of raw materials as required by the company and supply raw materials within short notice if there is urgency in the use of such raw materials.

8. Recommendations

The study recommends that companies should prioritize all critical success factors that influence the choice of suppliers because acquisition of the right raw material and cost incurred affect overall financial performance of the company.

The study also recommends that companies should outsource for services of consultants in procurements in monitoring and evaluating effectiveness of strategies adopted in purchasing raw materials. This can enhance cost efficiencies in procurement process.

The study further recommends that employees and managers in purchasing department in manufacturing industry should undergo continuous training and have access to updated market conditions. This is in line with the dynamism of the business environment and the need to have appropriate information for effective and efficient supplier selection decision making.

The study also recommends that an entity' staff should adhere to all strategies, rules and regulations regarding supplier selection as well ethical standards in purchasing in ensuring that the performance objectives of the purchasing function and entire entity are achieved.

9. Suggestions for Further Research

The following areas are recommended for further research; the challenges encountered by purchasing entities during the selection of suppliers of raw materials in manufacturing industry in Kenya , the impact of poor supplier management and relationships on manufacturing entities and the impact of supply cycle times on performance of manufacturing entities.

References

[1] Aliouat and Boualem (1997). The effects of strategic alliance on competition in supply management. *The International Journal on Strategic Management pp 17-23.*
[2] Bengtsson, Maria, Kock and Soren (2000). Competition in business networks- to cooperate and compete simultaneously. *Industrial Marketing Management Vol. 29 No. 5 pp.411-426.*
[3] Brandenburger and Nalebuff (2006). Information Systems Strategy and Implementation: A Case Study of a Building Society. *ACM Transactions Information Systems, 12 (2006) 150-173.*
[4] Charnes, Cooper and Rhodes, E. (1978). Measuring the Efficiency of Decision Making Units. *European Journal of Operational Research 2: 429-444.*
[5] Chen, F., Ryan and J.K. (1999).The bullwhip effect: Managerial insights on the impact of forecasting and information variability in supply chain. *Kluwer Academia Publishers, Boston Vol.17:419-439*
[6] Christopher, M. (1996). *Emerging Issues in Supply Chain Management*. Proceeding of the Logistics Academic Network Inaugural Workshop, Warwick.

[7] Compton, H. K. (1985). *Supplies and Materials Management* (3rd Edition). London: Macdonald and Evans Press.
[8] Cooper, D.R. and Schindler P.S. (2000). *Business Research Methods (7th edition)*. New York: Irwin/ McGraw-Hill.
[9] D'souza, D.E and Willims F.P (2000). Toward a taxonomy of manufacturing flexibility dimensions. *Journal of operations management, Vol. 18(5) 577-593.*
[10] Dahel N. (2003). Vendor Selection and Order Quantity Allocation in Volume Discount Environments. *Supply Chain Management Journal, Volume 8(4), 334-342.*
[11] David D., Donald, D. and Stephen, S. (2006). *World Class Supply Management*. Pennsylvania: Academic Intent Publishers.
[12] De Toni, A., and Tonchia S. (2003). Strategic planning and firm's competencies: Traditional approach and new perspectives. *International Journal of Operations and Production Management, 13, 138-152.*
[13] Garvin and David, A. (2002). Competing on the Eight Dimensions of Quality. *Harvard Business Review, 65(6), 101-109.*
[14] Gerwin D. (2009). Manufacturing Flexibility. A Strategic Perspective. *Management Science Journal Vol. 39 pp 395-410.*
[15] Ghodsypour, S.H. and C. O'Brien (1998). A decision support system for supplier selection using an intergrated analytical hierarchy process and linear programming. *International Journal of Production Economics 56-67.*
[16] Gillingham, M. (2000). *Purchasing and Supply Chain (6th edition)*. London: Pearson Education Publishers.
[17] Gronroos C. (2000). Service Management and Marketing a Customer Relationship Management Approach in Competition. Chichester, John Wiley and Sons.
[18] Hayes, R. H., S. C. and Wheelwright (2003). *Restoring our Competitive Edge. Competing through Manufacturing*. New York, John Wiley and Sons.
[19] Hunja and Robert, R. (2003). Obstacles to Public Procurement Reform in Developing Countries. The Netherlands: Kluwer Law International.
[20] I.P.A.R. (2004). Are Export Processing Zones Relevant in a Liberalized Environment? The Kenyan Case. *Discussion Paper No. 045/2004, Nairobi*: *IPAR.*
[21] Kalpakjian, Serope, Steven and Schmid (2005). *Manufacturing, Engineering and Technology*. London: Pearson Educational Publishers.
[22] Koste, L., and Malhotra, M. (2004). A theoretical framework for analyzing the dimensions of manufacturing flexibility. *Journal of Operations Management, 18(1), 75-94*.
[23] LaLonde, B.J., Ginter, J.L. and Stock, J.R. (2007) The Ohio State University 2007 survey of career patterns in logistics and Website at www.cscmp.org.
[24] Lee, H.L., Padmanabhan and Whang, S. (1997). *The bullwhip effect in supply chains*. Sloan Management Review, 38(3), 93-102.
[25] Leong, G. K., Snyder, D. L. and Ward, P. T. (2007). Research in the process and content of manufacturing strategy. *Omega; international journal of management science, Vol. 23, No. 2, pp. 109-122.*
[26] Lewis, H. (1943). Industrial Purchasing Principles and Practices. Chicago: Richard Ervi Press,
[27] Liu, F.H.F & H.L Hai. (2005). The voting analytic hierarchy process in supplier selection. *International Journal of Production Economics 97(3):308-317.*
[28] Lofgren, Hans and Praveen, K. (2007).The challenges of achieving Kenya's vision 2030.A macro perspective. *World Bank, policy note 42844-KE.*
[29] Louviere, J.J. (1988). *Analyzing Decision making:* Matric Conjoint Analysis. Newbury Park, CA: SAGE Publications:
[30] Lummus, R.R., and Vokurka, R.J. (2004). Defining supply chain management: A historical perspective and practical guidelines. *Industrial Management and Data Systems, 99(1 and 2), 11-17.*
[31] Lysons, K and Gillingham, M. (2003). *Purchasing and Supply Chain Management (6th edition)*. Harlow: Prentice-Hall Publishers.
[32] Lysons, M. and Farrington, B (2006). *Purchasing and Supply Chain Management (7th edition*). London: Prentice Hall Publishers.
[33] Lysons, M.A.M., Dooley, K., Johnny, Rungtusanatham, M. (2009). Manufacturing Firm Reaction to Supply Failure and Recovery. *International Journal of Operations and Production Management, 27 (3), 323-341.*
[34] Miles, G. (2009). Global Fund Consortium to Improve Procurement and Supply Chain Management. *John Snow Inc. London.*
[35] Miles, E., Donna, M., Fynes, B. and Lynch, D. (2009). Communication Media Selection in Buyer-Supplier Relationships. *International Journal of Operations and Production Management, 28 (4), 360-379.*
[36] Motwani, J. and Youssef, M. (1999). Supplier selection in developing countries: a model development. *Emerald Journal, 10(13):154-162*.
[37] Mugenda, O.M and Mugenda, A.G. (2003). Research Methods. Nairobi: Act Press.
[38] Muralidharan, C., Anantharaman, N., and Deshmukh (2002). A multi-criteria group decision making model for supplier rating. *The Journal of Supply Chain Management*, pp 22-33.
[39] Porter, M.E (1980). Competitive Strategy. New York: Free Press.
[40] Postrel and Steven (2000). Notes on Strategic Advantage. *Cox School of Business, Southern Methodist University.*
[41] Sethi, A.K. and Sethi, S.P. (2002). Flexibility in Manufacturing: *International journal of Flexible Manufacturing Systems, 2(4), 289-328.*
[42] Shapiro, R.D. and Heskett, J.L. (1985). Logistics Strategy: *Cases and Concepts*. St.Paul: West Publishing.
[43] Slack, N. (2005). The Changing Nature of Operations Flexibility. *International Journal of Operations and Production Management, 25(12), 1201-1210.*
[44] Starling, K. and Cunningham, M. (2007). Supplier Performance Evaluation: Lessons from a large multinational organization. *Journal of manufacturing technology management, 18 (4), 352-366.*

[45] Upton, D. (1994). The Management of Manufacturing Flexibility. *California Management Review, Vol, 36 72-89*
[46] Verma, R. and Pullman, M.E. (1998). An Analysis of the Supplier Selection Process. *Omega International Journal of Management Science, Vol, 26: 739-750.*
[47] Vickery, S. K., Droge, C., and Markland, R. R. (2004). Production competence and business strategy: Do they affect business performance. *Decision Sciences Journal 24(2), 435-456.*
[48] Vickery, S. K., Droge, C., and Markland, R. R. (2005). Strategic Production Competence: Convergent, discriminant, and predictive validity. *Production and Operations Management Journal Vol, 3(4), 308-318.*
[49] Vokurka and O'leary-kelly (2000). A Framework for Assessing Value Chain Agility. *International Journal of operations and Production management, Vol, 26 pp 118-140.*
[50] Vokurka, R. J., and Lummus R.R. (2000). The role of just-in-time in supply chain management. *The International Journal of Logistics Management, 11 (1), 89-98.*
[51] Wheelwright, S.C.(2002).Manufacturing Strategy: Defining the missing link. *Strategic Management Journal, 5(1), 77-91.*
[52] Willcocks, L., and Sauer, C. (2000). *Moving to E-business*. London: Random House Press.
[53] World Bank. (2004). Enhancing the Competitiveness of Kenya's Manufacturing Sector: The role of investment climate. *World Bank Report, 202(244) 105-159.*

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