THE INFLUENCE OF SPECIFIC SUPPLIER DEVELOPMENT PRACTICES ON A FIRM'S COMPETITIVE ADVANTAGE: A CASE STUDY OF SAFARICOM LIMITED

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ABSTRACT

Supplier development is any effort a buying firm expends on a supplier to increase the performance and capabilities to meet the buying firm's own short-term or long-term supply needs and generate favorable results. This study sought to address the influence of specific supplier development practices on a firm's competitive advantage, and the analysis of the relationships between supplier development practices and firm's competitive advantage in the context of Kenya's telecommunication industry in particular Safaricom Limited. A descriptive design where questionnaires were sent to respondents was adopted. An analysis of the data collected was done to determine the extent to which the specific supplier development practices influence cycle times, cost delivery and quality. The analytical solutions of supplier development practices will help reinforce the theoretical expositions of the influence of specific suppler development practices on the competitive advantage of a buying organization.

Key words: *supplier development, competitive advantage, direct involvement, performance objectives, collaboration*

Introduction

Supplier development is any effort a buying firm expends on a supplier to increase the performance and capabilities to meet the buying firm's own short-term or long-term supply needs and generate favorable results. This study sought to address key issues that concern the examination of the influence of specific supplier development practices in forecasting a firm's competitive advantage, and the analysis of the relationships between supplier development practices and firm's competitive advantage in the context of Kenya's telecommunication industry in particular Safaricom Limited.

The ability to get products and services to the market ahead of competition becomes a source of competitive advantage in the telecommunications sector due to demand for new service and shortened product life cycles. Achieving operational excellence and cost reduction has been necessitated by a radical shift from supply-driven market to demand-driven market experienced in the telecommunication industry. Sourcing strategies such as spend consolidation, specification rationalization, improved supplier selection and shrewd negotiation have yielded impressive benefits year after year but are likely to provide diminishing returns. Therefore to deliver sustainable savings, address inefficiencies and unlock the next layer of savings firms need to fundamentally improve their suppliers' capabilities through joint process rationalization (Lia, Humphreys, Yeung & Cheng, 2007).

The telecommunication industry has been an important industry in the economic development of Kenya. Just like the rest of the world, the telecommunication industry has gone through profound changes; infrastructural developments by operators have largely been focused on network expansion for increased nationwide coverage (www.pwc.com). The telecommunication industry in Kenya has seen increased competition and became more pronounced in 2008 with the entry of Orange Telecom and Essar joining Safaricom and Airtel (previously Zain).

A firm's ability to control, adapt and improve its supply chain can significantly impact its competitive position (Awino & Wainaina, 2011). Firms continually strive to search out and implement new strategies, practices, and tools across their organizations so as to deliver ever-increasing value to shareholders. In the supply chain and sourcing domains, firms are changing the way they source, produce and distribute goods or services to their customers, in search of reduced costs and greater efficiency (Lysons & Farrington, 2006).

One of the basic objectives of the purchasing function is to maintain a network of capable suppliers. Since today's firms have turned to core competencies, they have become more reliant on suppliers and therefore to achieve competitive advantage, buying firms must ensure that suppliers performance, capabilities and responsiveness matches or surpasses those experienced by the buying firm's competitors (Wagner, 2006). Supplier development entails embracing supplier expertise and aligning it to the buying organization's business need, and, where appropriate, vice versa. The purpose for supplier development ranges from minor activities such as slight adjustments in staffing levels to very substantial such as the appraisal and re-launch of an entire range of critical products or services. Many firms have recognized the long term and strategic benefits of supplier development, and have established supplier development (SD) programs.

Statement of the Problem

A firm's short-term objective of supply chain management is to increase productivity and reduce inventory and cycle time, while the long-term strategic goal is to increase customer satisfaction, market share and profits for all members of the supply chain (Tan, Lyman, & Wisner, 2002). Today large manufacturing companies in Kenya are mainly focusing on becoming efficient and flexible in their production so as to handle uncertainty in their business environment (Awino & Wainaina 2011). Buying firms are increasingly relying on their suppliers to deliver defect-free and technologically advanced products, in a timely and cost effective manner but often this suppliers lack the ability to perform adequately in one or more of these areas (Krause, 2007). Hence the buying firm faces the decision of whether to look for an alternative source of supply, or work with the suppliers to remedy any short-comings if the product or service provided by a supplier does not meet the required standards.

Since today's firms have turned to core competencies, they have become more reliant on suppliers and therefore to achieve competitive advantage, buying firms must ensure that suppliers performance, capabilities and responsiveness matches or surpasses those experienced by the buying firm's competitors (Wagner, 2006). A study on various firms that practiced supplier development found out that 72.1% practiced enhancing working relationships, 68.1% favored increasing performance goals, 51.5% required capability improvements, 27.9% provide support personnel, 25.3% conducted training programs, 17.6% agreed to contingent liability, 10.3% provided capital, 11.8% provided equipment while 8.8% provided progress payment supplier (Monczka, Peterson, Handfield & Ragatz, 1998).

The existing literature has provided broad research to support the assertion that supplier development is an integrated means of achieving and sustaining competitive advantage (Monczka, Trent & Callahan, 1993 & Hartley & Choi, 1996). However, these studies have not established a link between the specific supplier development practices and a firm's competitive advantage (Robinson & Malhortra, 2005). Therefore a dedicated study is required to establish the effect of specific supplier development practices on a firm's competitive advantage in the telecommunications industry in Kenya.

Objectives of the Study

1. To establish the effect of direct involvement in supplier development programs on firm's competitive advantage.
2. To ascertain if supplier performance objectives enhances firm's competitive advantage.
3. To determine whether collaboration with suppliers increases firm's competitive advantage.
4. To examine the influence of competitive pressure on a firm's competitive advantage.

Literature Review

Literature Review on Specific Supplier Development Practices

Specific supplier development efforts might impact on a buyer's operational performance. Lia, et.al (2007), found out that there is an impact of asset specific investments such as provision of training, equipment and supporting personnel on market responsiveness. Both product-based and service-based firms directly involve themselves in supplier development activities and that investing in suppliers helped firms improve the quality of products or services and reduce on costs (Krause & Scannell, 2002). Direct involvement as a factor of supplier development consisted of a set of practices such as: formal supplier evaluation, certification, recognition, informal supplier evaluation, supplier site visits, training, and buyer sites and facilities visits, as well as verbal or written demand for performance improvement.

Performance goals are a motivation for higher levels of performance and that buying firms should challenge suppliers to achieve higher levels of performance. Only by aggressively increasing supplier performance expectation can a buying firm expect supplier contributions to increase at an accelerated rate. Moreover, only those suppliers that meet these goals should be kept in the supplier base (Krause, 1997). Joint action is most critical supplier development practice as it enhances competitive performance of the buyer. Organizations that pursue supply development work closely together with their suppliers on product design in order to eliminate non-value adding activities. Thus close collaboration with suppliers will ensure long-term beneficial buyer-supplier relationship that may reduce transaction costs and improve operational efficiency Lia, et.al (2007).

A buying firm may apply competitive pressure if they are willing and able to switch alternative suppliers. The threat of using alternative suppliers may make suppliers to improve on the quality and cost of services. This may also enable supply to reduce their lead times thus helping the buying organization reduce the process cycle times (Dyer & Ouchi, 1993). Using an alternative supplier ensures a supplier offers competitive prices for its supplies and also strive to reduce lead times (Hagberg-Andersson, Kock & Åhman, 2000).

Conceptual Framework

Figure 1 shows a proposed model that links supplier development programs with firm's competitive advantage and is investigated in this study. The model is developed based on the theoretical expositions of various supplier development practices and their possible links to a firm's competitive advantage. In essence, the model is founded upon the belief that supplier development is a key component in determining the buyer firm's competitive success

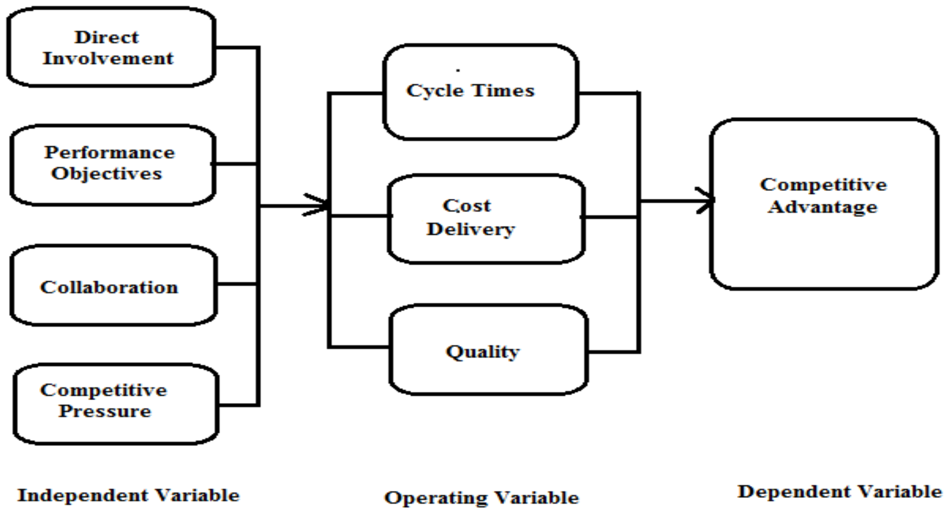

Figure 1: Conceptual Framework

Research Methodology

Research Design

A research design is a plan, structure and strategy conceived so as to obtain answers to research questions and control variables. Mugenda & Mugenda (2003) explains that a research design constitutes the blue print for data collection, measurement and analysis. The study applied a descriptive design where questionnaires were sent to professional staff within the organization. A descriptive research is concerned with determining the frequency with which something occurs or the relationship between variables (Kothari, 2009). This method was preferred because it determines and reports things as they are (Mugenda & Mugenda, 2003). The approach was also appropriate for the study since the research intended to collect detailed information through description and is useful for identifying variables.

Population

According to Saunders, Lewis and Thornbill (2009), a population is the total collection of elements about which a sample frame is taken and from which inferences are to be made. The main factor considered in determining the sample size is the need to keep it manageable enough (Kothari, 2009). This enables a researcher to derive from it detailed data at an affordable cost in terms of time, finance and human resources (Mugenda & Mugenda, 2003). The sampling frame and the sample population have a high degree of correspondence since the accuracy of the sample depends on the sampling frame (Kothari, 2009). The sampling frame for the study provided all the required information with respect to the objectives of the study and the elements had the required characteristics. Therefore top level managers, middle level managers and other staff members that form the sample frame provided all the necessary information.

Target population is the specific group relevant to a particular study (Zikmund, 2003). It's the totality of cases that confirm to certain specification which defines the characteristics that are included in the target group (Mugenda & Mugenda, 2003). Considering the main purpose of the study was to establish the influence of specific supplier development programs on firm's competitive advantage, the most appropriate target population was all the Safaricom employees working in the procurement and supply chain department. The reason for choosing the department was because they are directly involved with suppliers and therefore are aware of the benefits of supplier development programs and could help researcher to link those benefits with supplier development programs. The study population consisted of all the employees working in Safaricom Limited. Safaricom was chosen because of its dominance in the telecommunication industry in terms of market share, profitability and service delivery in the East and Central African region. Thus it possessed the best characteristics to provide adequate and valuable data for the study.

Sample Size and Sampling Technique

A sample size is the minimum number of respondents in a study Mugenda & Mugenda (2003). The sample depends on what one wants to know, the purpose of inquiry, what will be useful and what can be done with the available time (Kothari, 2009). Purposive sampling is a non-probabilistic which allows the researcher to use cases that have the required information to satisfy the objectives. The supply chain department was targeted as it possessed the required characteristics. Simple random sampling was used to come up with a representative portion of the sample. This method was appropriate as the population is homogeneous. The study will target 84 respondents as this is the total number of staff working in the supply chain department. As indicated by Mugenda & Mugenda (2003), Gay suggests that for descriptive research 10% of accessible population is enough.

Sample size, n, determination is given by the formulae

$$n = \underline{Z^2 \times p\,(1-p)} / C^2$$

Finite sample size, $n_f = n / (1+ n/N)$, when the population is less than 10,000

Where:

C = ± 5, Confidence Interval expressed as decimal

p = the population proportion (assumed to be .50)

Z = Confidence Level at 95% on a normal curve (standard value = 1.96)

N = Population

$$n = \frac{1.96^2 \times 0.5\,(1-0.5)}{0.05^2}$$

$$= 384.16$$

$$n_f = 384.16 / (1+384.16/84)$$

$$= 69$$

Therefore a sample size of 69 respondents was chosen within the margin of error.

Methods of Data Collection

Methods of data collection to used involved both primary and secondary data. Primary data was derived from administration of questionnaires to the employees. The questionnaires had closed-ended questions to facilitate easier analysis as they are in immediate usable form while open-ended questions will be used to encourage the respondent to provide in-depth and felt response without feeling held back when revealing information. To enhance the quality of the information to be obtained, matrix questions were included where the respondent indicated the extent to which variables are practiced on a Likert scale. This enabled the respondents to take less time on the questionnaire thus ensuring participation. The researcher personally administered the questionnaires. The source of secondary data such as books, magazines publications, reports and various internet search engines was relied upon. Questionnaires allowed for confidentiality of respondents to be kept. Other methods of data collection that were used include observation and brief unstructured interviews. All these were used for the purpose of collecting detailed data and clarify on data submitted in the questionnaire.

Piloting the research instrument

Inappropriate and unsystematic procedures in questionnaire development, testing and evaluation may undermine the quality and utilization of data (Sekaran & Bougie, 2009). The purpose, objectives and research questions was examined and a thorough understanding of the problem through literature search was done by the researcher before generating the questions and statements linked to the objectives of the study. The researcher carried out a pilot test so as to pretest the questionnaire before actual data collection to enable check the effectiveness of the questions wording and order in achieving desired results. The responses on the respondents helped check the validity and reliability of the instrument.

Data Analysis and Presentation

Data analysis consists of examination, categorization and tabulation of the evidence to address the initial propositions of the study (Kothari, 2009). Both qualitative and quantitative techniques were used in the analysis of the data. The data obtained from the research instruments was analyzed by use of descriptive statistics (mean, standard deviation, variance and percentage. Data is presented using bar charts and frequency tables. To establish the link between the independent variables on firm's competitiveness at Safaricom Limited an analysis was done. The Pearson Correlation Coefficient (R_{xy}) was determined with the main objective of establishing the nature and strength of relationship between the dependent variable and all the independent variables.

Research Findings

The dependent variable in this study was competitive advantage. Three aspects of competitive advantage were measured: cycle times, cost delivery and quality. Respondents were asked to rate the extent of influence the specific supplier development practices had on the competitive dimensions on a five-point Likert scale, where 1 represented "very large extent" and 5 represented "no extent". The means, standard deviations and variance for the items included in competitive advantage are shown in tables. The independent variables in the study: direct involvement, performance objectives, collaboration and competitive pressure, were measured on a five-point Likert scale. Respondents were asked to indicate how strongly they agreed or disagreed with the statements with 1 corresponding to "strongly agree" and 5 corresponding to "strongly disagree".

Inferential Analysis

To establish the link between the independent variables on firm's competitiveness at Safaricom Limited an analysis was done. The Pearson Correlation Coefficient (Rxy) was determined with the main objective of establishing the nature and strength of relationship between the dependent variable and all the independent variables. The Pearson Correlation Coefficient (Rxy) is given by

$$R_{xy} = \frac{n\sum xy - \sum x \sum y}{\{(n\sum y^2 - (\sum y)^2 (n\sum x^2 - (\sum x)^2)\}^{1/2}}$$

Where:

x = Independent variable

y =Dependent variable

n = Number of pairs of observations of x and y

The Pearson Correlation Coefficient was run to establish the strength of the relationship between independent variables; direct involvement, performance objectives, collaboration and competitive pressure and the dependent variable; competitive advantage. From the results, direct involvement and competitive advantage have a positive correlation with R2 = 0.926, performance objective, R2 = 0.831, collaboration, R2 = 0.856 and competitive pressure, R2 = 0.680. The results indicate that direct involvement, performance objectives and collaboration have a greater influence on competitive advantage than competitive pressure. The results indicate that there is a positive influence on the components of competitive advantage.

Discussion

This study suggests that direct involvement in supplier activities should be considered paramount. With globalization of the market, the issue of having capable suppliers becomes an important factor to be successful in business. Therefore for a firm is to remain globally competitive it needs to invest in suppliers to help improve on the quality of products or services and reduce on costs (Krause & Scannell, 2002).

Secondly, the data in this study revealed that performance goals were a motivation for higher levels of performance and that buying firms should challenge suppliers to achieve higher levels of performance(Krause, 1997).. Thus, increasing supplier performance goals was an efficient way to motivate suppliers to improve. Therefore the findings of this research underpin the importance of performance objectives for the suppliers.

Third, the study suggests that early involvement of suppliers in product design and development, sharing and provision of proprietary information with suppliers helped the firm to come up with innovative products fast enough before competition. It is therefore paramount for the buying firm to develop to collaborate with the suppliers so that products and services meet customer requirements (Lia, Humphreys, Yeung, & Cheng, 2007).

Finally, competitive pressure is meant to reduce costs of operation and help improve the bottom line (Hagberg-Andersson, Kock & Åhman, 2000).; the research findings indicate that the firm was pursuing other supplier practices. It was established that the firm used competitive pressure occasionally and it was not included in the formal supplier development programs although it did influence the firm's competitive advantage.

Summary of Findings

The primary purpose of this research was to establish the influence of specific supplier development practices on a firm's competitive advantage in the telecommunication industry. Specifically these questions were asked: Is there effect in direct involvement in supplier development programs to a firm's competitive advantage? Do supplier performance objectives influence a firm's competitive advantage? Does collaboration with suppliers influence a firm's competitive advantage? What is the effect of competitive pressure on suppliers in a firm's competitive advantage? The analysis of a case study of a large telecommunication firm in Kenya was used to examine the research questions.

In the process of addressing these questions, valid and reliable instruments were developed to measure direct involvement in supplier activities, supplier performance objectives, collaboration with suppliers, competitive pressure on suppliers and competitive advantage. The research included a rigorous literature review and pre-test with professionals and the supervisor. A lot of care was taken during item generation, pre-testing, and pilot testing to ensure content validity. The results can be generalized across the telecommunication industry since instruments have high reliability for all respondents in the sample.

When the influence of the specific supplier development practices is examined on competitive advantage, the four research questions were supported. The study showed that, use of supplier development programs enabled the firm to have a competitive edge over its rivals. The research also confirmed that improving a supplier's capability helped the firm to achieve high levels of quality, cost delivery and cycle times thereby providing a competitive advantage.

Therefore research findings emphasize the influence of direct involvement in supplier activities such as site visits by the buying firm's personnel to supplier premises, inviting suppliers' personnel to the firm's site, provision of training/education to supplier personnel provision of equipment/tools to the supplier and investing in suppliers operations.

It was also established that setting supplier performance objectives impacted on the business cycle times and quality since the buyer emphasized on on-time delivery and conformance to quality standards. The research findings indicate that collaboration with suppliers enable the firm to come up with innovative products fast enough before competition through early supplier involvement in product design and development hence reducing the time taken. However, the research findings found out that competitive pressure on suppliers did not influence competitive advantage as other supplier practices.

Conclusions

The purpose of this research was to establish the influence of specific supplier development practices on a firm's competitive advantage. Based on the research findings there are several major points which can be drawn. The supplier development practices represent an initiative by the buying firm to increase the capabilities and performance of their suppliers thus enhancing a buyer's competitive advantage. Increasing competitive edge over rivals lies in pursuing ways to enhance product quality and reduce cost within a short business cycle at the same time. In order to survive in the market place and create competitive advantage organization increasingly focused on performance at all levels in the supply chain. The findings of this research underpin the importance of performance objectives for the suppliers. With performance objectives, suppliers strive to achieve and improve on their performance therefore leading to competitive advantage for the firm.

The final product or service is largely influenced by the key components provided by suppliers and as such suppliers take more responsibility. Reduction in variations and increasing reliability of the product or service correlate strongly with the ability of firm to coordinate design and production effectively with suppliers. It is therefore paramount for the buying firm to develop to collaborate with the suppliers so that products and services meet customer requirements although application of competitive pressure is meant to reduce costs of operation and help improve the bottom line; the research findings indicate that the firm was pursuing other supplier practices. It was established that the firm used competitive pressure occasionally and it was not included in the formal supplier development programs although it did influence the firm's competitive advantage.

Recommendations

The implications for procurement and supply chain managers are clear. Having in place formal supplier development programs will increase effectiveness of operations and improve on market responsiveness through shortened lead times, on-time delivery, fewer defects, reduced warranties, shared price reduction and shortened time for new product development. The results could in turn lead to shorter cycle times, improved cost delivery and high quality products and services hence improving the firm's competitive advantage. The research findings of this research further lend credence to the link between supplier development programs and competitive advantage. Hence procurement and supply chain managers may use supplier development programs to improve their competitive advantage in several ways:

1. Supplier development programs can be used as a tool to encourage innovation by suppliers. This can be done through collaboration.
2. Supplier development programs can be used to deliver on cost thereby contributing to the bottom line of the firm.
3. Supplier performance goals can be used to set challenging targets that can help improve on quality and business cycle times.

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