

ASSESSMENT OF MATERIALS MANAGEMENT IN THE KENYAN MANUFACTURING FIRMS-EXPLORATORY SURVEY OF MANUFACTURING FIRMS BASED IN NAIROBI

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ABSTRACT

Materials play a big part in the manufacturing firms as it account for about 56% of the annual turnover. This research analyzed the attention and recognition the Kenyan manufacturing firms are giving to the materials management. The motivation of the study was based on the fact that long-term success and survival of any Organization depends entirely on how well organization are managing their costs. The study was a survey of medium and large manufacturing firms based in Nairobi. The data was collected using a structured questionnaire consisting mainly of close-ended questions and some few open-ended questions. The main objective of this study was to determine the kind of attention and recognition the Kenyan manufacturing firms are giving to material management and also shed light on the benefits of adopting good materials management practices. A sample size of 55 firms was collected and analyzed using descriptive statistics. The research revealed that not much attention was given to materials management as only about 23 percent of the firms had in charge of materials reporting directly to the chief executive officer. At least quite a number of large firms had well established departments to manage materials compared to medium firms. The conclusion drawn from the research was that Kenyan firms were not practicing professionalism in materials management and that materials management was more suited for large firms. Recommendations made were that, owing to the large sum of money companies were spending on materials and material related activities, a lot of emphasis and attention needed to be given to materials management. Materials management needs to be recognized as a top management function.

Keywords: Assessment of Materials Management, Manufacturing Firms, Nairobi, Kenya.

INTRODUCTION

Material management is a concept which brings together under one management responsibility for determining the manufacturing requirement, scheduling the manufacturing processes and procuring, storing and dispensing materials wild,(1995). As such it is concerned with and controls all activities involved in the acquisition and use of all materials employed in the production of finished goods.

It is clearly evident that Materials Management (MM) concepts enhance communication and coordination by bringing together to one responsible individual, all functions which are interrelated. This integration of interrelated materials functions is the basis of materials management concept. As explained by Bose (2007) supply chain coordination improves of all stages of the chain take actions that together increase total supply chain profits. Supply chain coordination requires each stage of the supply chain to take into account the impact its actions have on other stages. Bose notes that lack of coordination occurs either because different stages of the supply chain have objectives that conflict or because information moving between stages is delayed and distorted.

In the earlier year, Materials Management was treated as a cost centre, since Purchasing Department was spending money on materials while Stores was holding huge inventory of materials, blocking money and space Ramakrishna (2005).However, with the process of liberation and opening up of global economy, there has been a drastic change in the business environment, resulting in manufacturing organizations exposed to intense competition in the market place. The Manufacturing Companies' World Wide has been

working out various strategies to face the Challenges and to cut down manufacturing costs to remain competitive. As noted by Ramakrishma (2005) progressive management has since recognized that Materials Management can provide opportunities to reduce manufacturing costs and can be treated as a profit Centre.

Currently the world is undergoing change, and the world market has become almost like a village market. Each country must strive to keep itself in business. Major Competition has moved from the market to the production floor. All organizations have been forced to look onto the cost of production so that they can complete through cost reduction. Backed with advanced technology, organizations are closely monitoring their cost and embarking on efficient and effective material management. For example, firms are moving from traditional methods of evaluating and selecting suppliers yearly to supplier management.

Kenyan Organizations are faced with a lot competition in the current markets. This has led to the need for coming up with better method of managing and measuring how resources are utilized by various jobs or products, and therefore be able to eliminate any wastage in the value chain. The new cost management methods require having the right persons doing the right job. In this case, the major concern is how materials functions are organized and actually who is responsible over these functions in the Kenyan manufacturing firms.

A research which was done in America showed that materials contribute to almost sixty percent of the annual turnover in the manufacturing firms (Evans et al, 1987). This shows clearly that a lot of concern should be given to materials management to avoid unnecessary costs. Actually any function of the firm which accounts for well over half of its receipts certainly deserves a great deal of managerial attention. Several researches have been carried out by Center for Advanced Purchasing (CAPS) to find out the level of usage of material management (MM) concept in organization. The studies were based in America. The CAPS study of 1979 when compared with the study done in 1988 showed an increasing trend in the use of materials management concept Leenders et al, (1989).

The researches that have been done before have majorly dealt with approaches used in inventory management. Actually no research has been done on the status of materials management in Kenya. Hence the study is set to find out the current state of the application and practice of materials management concepts in medium and large Kenyan manufacturing firms.

THEORETICAL BACKGRUOND AND INFORMING LITERATURE

This paper reports on the need more attention on materials management. The research intention was to improve procurement and add value to the system by reducing cost and eliminate time wastages. As noted by Waters (2006) the traditional approaches to materials management uses planned operations where managers design a detailed scheduled for each distinct activity in the chain. By coordinating these schedules, managers control the flow of materials. The problem with the traditional approach which is still being used by most of the Kenyan firms is that it is based on a paper system and even when organizations move to automation, they often automate the same procedures. This has fundamental weaknesses of taking a long time, being expensive, relying on lot of paperwork, physically moving this paper between locations, having a lot of people doing the administration, being unreliable, introducing errors, having more people to supervise and control administration. These problems are largely overcome when organizations move electronic purchasing and hence adopting materials management approach.

Dobler and Burt (1996) postulates that materials management provides an integrated system approach to the coordination of materials activities and the total material costs. They view it as something that advocates assigning to a single operating department all major activities, which contribute to the cost of materials. The objective is to optimize performance of materials systems, as opposed to sub-optimizing the performance of individual operating units that are part of the material system.

The views given above clearly explain that materials management considers material flow as a system, which needs to be integrated. The integration will help in monitoring and evaluation of the system. The basic objective of materials management as explained by Chase, Jacobs and Aquilano (2009) is to ensure that the right item is at the right place, at the right time and at a reasonable cost. The intention of

having materials management system in place is for solving materials problems from a total company view point (optimize) by coordinating performance of the various materials flow. Fearon and others (1988) see the introduction of computers as a great boost to the adoption of materials management, as materials function have many common databases.

Materials management has become typical form of organization in recent years. Time has come, when organization and its entire staff have to consider their decisions in relation to how they will affect materials side of the business. Materials related costs, that is, ordering costs, quality costs, holding costs and price paid for the item need to be managed collectively. It is realized that with an interest rate of say 20 percent, holdings stocks becomes very expensive. If you could reduce the stock levels worth Kshs. 1 million with 20 percent, you would save Kshs. 200,000 per annum.

As noted in Chary (2008) we keep material inventory in operations for three reasons; transactions, precautions and speculation. While speculative inventory cannot be encouraged particularly in a developing country like Kenya starved of resources, there is need for transaction or “regular” inventory due to the lack of perfect synchronization of inflow and outflow of material and for precautionary or “safety” inventory to provide cover of any inability to predict demand supply of material. The question is this what level of stock should this be? This is more particular when countries like Kenya are competing with Multi National organization some of whom have adopted new concepts like Just-in-Time (J.I.T).

According to Ramakrishma 2005, on an average, half the sales income in an organization is spent on materials. Suppose a firm is spending 50% of its volume on material and the profits are say 10% of sales volume. A 2% reduction in materials cost will boost the profits to 11% of sales or the profits will be increased by 10%. To achieve the increase in profit through sales efforts, a 10% increase in sales volumes will be necessary. In other words, organizations earn or loose large sums depending on how effective are their Materials Management.

As noted in Barnes (2009) modern organization talk about supply network. He defines a supply network as the set of interconnected relationships between all the parties that supply inputs to, and receive outputs from an operation. The focus is on a holistic approach which means the entire chain from internal to external customers. The success of any supply network depends on its ability to satisfy the needs of the ultimate customer, the end consumer of its products and services. Therefore, the network as a whole needs to be designed and managed in a way that enables it to do so effectively and efficiently as possible. It is not just the organization’s own operations that need to be managed strategically to meet customer needs, but all the elements of the supply chain, individually and collectively. A key facet of the supply network is the nature of relationship between purchaser and supplier.

As explained by Jacobs, Chase and Aquilano (2009) , the concept of supply chain brings in the total systems approach to managing the entire flow of information, materials and services from raw materials suppliers through factories and warehouses to the end customer. They further emphasize that companies that face diverse sourcing, production and distribution decisions need to weigh the costs associated with materials, transportation, production, warehousing and distribution to develop a comprehensive network designed to minimize costs. As confirmed by Chase, Jacobs, Aquilano and Agarwal (2009) organization success depends on how they manage supply chain. They indicate clearly that it is important to monitor inventory at each stage because ties up money. The efficiency of the supply chain can be measured based on the size of inventory investment in the supply chain and that the inventory investment is measured relative to the total cost of the goods that are provided through the supply chain (Chase et al 2009).

According to Chondra, Meindl and Kalra (2007) the main drivers of supply chain performance are; facilities, inventory, transportation, information, sourcing and pricing. Information Technology plays a much more vital role among the drivers. Electronic data interchange (EDI) example allows companies to place instantaneous, paperless purchase orders with suppliers. EDI has allowed automated procurement since the 1980s, but its use is still growing quickly, Waters (2006). As reported by Chondra et al (2007) EDI is not only efficient, it is also decreases the time needed to get products to customers because transactions are faster and more accurate than when they are paper based. An organization that want to excel and guarantee its future, must design its systems with customer in mind. As noted by Levi et al

(2009) thinking in terms of customer value promotes a broader look at a company's offerings and its customers. It requires learning why customers purchase, continue to purchase, or defect from one a company. Supply chain management can impact the important customer value of price by significantly reducing costs (Levi et al, 2009). Customer value drives changes and improvements in the supply chain; some forced by customers and competitors and others undertaken to achieve competitive.

In summary this study draws attention on the need to change systems and structure for materials management for the purpose of improving profitability and competitiveness. As reported by Chase et al (2009) , the world manufacturing organization have moved toward complete elimination of waste by adopting new philosophies of management like lean production and value stream mapping.

METHODOLOGY

The population of interest consists of all large and medium manufacturing firms in Nairobi. The researcher considered this population more appropriate because of the level of activity and resource employed in materials. In determining the size of the firm, several different measures have been used and accepted as appropriate. One of these measures is the number of employees in the firm (Kirkpartick, 1984; Kenya industrial Research and Development Institute (KIRDI). Other measures of size are capital employed, volume of sales turnover and level and type of technology used Kukalis,(1991); Wordburn, (1984); Steel and Age, 1984). Aosa (1992) in his study combined sales turnover and number of employees.

This study used the number of employees to determine the size of the firm. The criterion was adopted because of the following reasons. Firstly, the short time available for the study could not allow the researcher to establish the volume of sales turnover, capital employed or level and type of technology used by the firms. And also such information could not easily be accessed. Secondly, the availability of a list of names of the firms constituting the population of the study and categorization was obtained from KIRDI's directory of manufacturing industries of 1997. The categorization is shown in the table below;

Table 1: Size of firms

Size of class code	Number of employees
A	5-19
B	20-49
C	50-99
D	100-199
E	200-499
F	Over 500

Source: Kenya Directory of manufactures industries, 3rd Ed. 1997.

In order to capture the interest of the research, firms with employees between 50-99 and 100 -199 are considered as medium. That is, size class code C and D; whereas firms with employees over 200 are considered large. Ownership and type of product manufactured were also considered in constructing the sampling frame for the study. A total of 178 firms fall within this category.

The choice of Nairobi as the area to be covered by the study was mainly due to convenience in terms of accessibility, time schedule and financial resources available to the researcher. Also, according to KIRDI's directory of manufacturing industries, most large manufacturing firms are located in Nairobi.

This study design was a sample survey, of descriptive type. It achieved its purpose by collecting and analyzing data from a sample of 55 firms. Survey is viewed as being suited for descriptive research (Luck and Rubin, 1987). Since the entire population of interest could not be covered, a survey was justified as this approach could allow generalization and hence representativeness.

This study adopted stratified – random sampling. These were stratified on the basis of medium or large firms and whether local or foreign. Because each and every stratum has its own special attributes.

A total of 55 firms were interviewed. This sample size was taken based on convenience and also because such sample size is considered large enough to provide a general view of the state of materials management in the manufacturing firms in the country and hence provide a basis for valid and reliable conclusions.

A simple random sampling technique was used to select the firms to be interviewed. The researcher collected and prepared a sampling frame of all the firms existing in each category, from the sampling frame, the sample to be interviewed was selected using random numbers generated from the random number tables.

The researcher used primary data collected from the firms. Only the relevant persons were interviewed, this was a manager who had worked for the organization for the last one year. The interviews generally involved chief executive officers, purchasing managers, materials managers and logistics.

Data was collected using a structured questionnaire consisting mainly of closed-ended questions and some few open-ended questions. The analysis was done using descriptive statistics. Since the study is investigative in nature, proportions, percentages, median and mean was used to summarize the collected data.

For data that could not be quantified, quantitative analysis was applied. Content analysis is applicable in open ended questions with an in exhaustive answer. It helps in extracting all the different factors, which have been mentioned by the respondents, and appears unique. These data analysis techniques were used in similar studies by Mentzer and Cox (1984), Wheelwright and Clarke (1976), Sparks and Mchurg (1984),

RESULTS

Out of a total of 75 firms visited, only 55 firms accepted to be interviewed. This gives a response rate of 73%. A total of 55 respondents were interviewed in this study. The respondents were the chief executive officers, purchasing managers, management accountants, materials manager and logistic manager. The choice of person to be interviewed was made depending on the person deemed responsible and conversant with materials management in the company. The researcher got the assistance from the Chief executive officer and the Human Resource Manager in knowing who to interview in an organization.

The sample characteristics here are presented in terms of biodata or respondents interviewed for example local, foreign and joint ownership and also whether the firm is medium or large.

The data analyzed contained 54.5% local companies, 18.2% foreign companies and 27.3% joint ownership. Further, 63.6% of the companies studied were from medium firm's category and 36.4% were from large firm's category.

Further analysis shows that eighteen firms were listed in Nairobi stock exchange making 32.7% and 37 were not listed making 67.3%. The sample selected considered factors like the populations existing in each category and accessibility of the relevant information required for the research.

Table 2. Annual Turnover

Levels of Annual turnover	Number	Percentage	Cumulative percentage
Upto Ksh 50 million	10	18.2	18.2
Ksh 51 million to Ksh 500 million	15	27.3	45.5
Ksh 501 million to 1 billion	14	25.5	71
Ksh 1.1 billion to 5 billion	9	16.3	87.3
Ksh 5.1 billion and above	7	12.7	100
Total	55	100	

Source: Research data

The result of the research showed that majority (27.3%) of the firms interviewed had an annual turnover of between Ksh 51 million to Ksh 500 million, followed by 25.5% of the firms with annual turnover of Ksh 501 to 1 billion. 18.2% had annual turnover of upto Ksh 50 million, 16.3% had Ksh 1.1 billion to 5 billion and lastly 12.7% had Ksh 5.1 billion and above.

Table 3: Proportion of the annual turnover spend on material and materials related costs

Proportion	Number	Percentage	Cumulative percent
0-20	0	0	0
21-40	9	16.4	16.4
21-60	21	38.2	54.6
61-80	25	45.4	100
81-100	0	0	100
Total	55	100	

Source: Resource data

As the result indicates, majority (45.4%) of the firms interviewed spend between 61-80% of annual turnover on materials and materials related costs, 38.2% of the firms spend between 41-60% and only 16.4% had expenditure of between 21% -40%.

Table 4

Class interval	X (Mid -point)	Frequencies	X F
21-40	30	9	270
21-60	50	21	1050
61-80	70	25	1750
		$\sum f$ 55	$\sum xf$ 3070

Source: Research data

$$\bar{X} = \frac{\sum xf}{\sum f} = \frac{3070}{55} = 55.8$$

From table 4 above, it was evident that Kenyan companies spend an average of 56% of their annual turnover on materials and materials related cost.

Table 5: Company's Growth Position

Growth stage	Number	Percentages	Cumulative percentage
Initial stage	0	0	0
Growing	27	49.1	49.1
Maturing	23	41.8	90.9
Declining	5	9.1	100
Total	55	100	

Source: Research data

From tables 5, it shows that the firms interviewed were majorly in growing and maturing stage. The result indicates that 49.1% of the firms were in growing stages and 41.8% were on the maturing stage and only 9.1% were on the declining stage. There was no firm in the initial stage. This enabled the research to analyze the data without any doubt on the information given by the firms concerning the kind of structures existing or expected to be there.

STRUCTURES FOR MATERIALS MANAGEMENT

Reporting and relations with other departments is very important to be considered for effective and efficient running of the system. For example the executive to whom the purchasing manager reports to gives a good indication of the status of purchasing and the degree to which it is emphasized within the organization. If the chief purchasing officer or the overall manager in-charge of material functions has vice president status and reports to the CEO, this indicates that purchasing has been recognized as a top management function.

Table 6: The in-charge of materials function reports (to whom)

Direct Report	Percentage
CEO	23
General manager	18
Financial controller	19
Management accountant	8
Operation/Production Manager	21
Logistics Manager	3
Others	100

Source: Research data

From the table 23% of the firms had the in-charge of materials reporting directly to the chief executive officer. These showed that firms had already recognized the importance of material functions based on its impact on the organizational cash flow. It is also viewed that a good number of firms had the person in-charge of materials reporting to the production or operations manager. The reasons they advanced was that most materials functions fall within their department.

In quite a number of firms, financial controller or management accountant controlled the materials and functions. They argued that this approach helps them monitor the expenditures and cost controls.

According to Bose (2007) organizational structure should be in line with the functions to be performed and the objectives to be achieved. The output of an undertaking mainly depends on successful implementation of innumerable activities which are followed in the process of building an effective structure.

Table 7: The existence of a specific department for materials functions, by organizations size (sales in KSh.)

	upto Ksh 50 million		Ksh 51 million to 500 million		Ksh 501 million to 1 billion		Ksh 1.1 billion to 5 billion		Ksh 5.1 billion and above		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
with specific department	3	30	6	40	8	57	5	56	5	71	27	47
Without specific department	7	70	9	60	6	43	4	44	2	29	28	53
Total	10	100	15	100	14	100	9	100	7	100	55	100

Source: Research data

The result from table 7 indicates that 27 of the 55 organization or 49 percent had specific department that performed most of the material functions. Majority (71%) of the organizations with sales turnover of Kshs 5.1 billion and above had specific department dealing with material functions. For organization that had this department, activities it performed majorly were; purchasing, receiving materials, inventory control, materials and purchasing research and materials planning and control.

APPLICATION OF MATERIALS MANAGEMENT CONCEPTS

In many studies done in earlier in America and Japan, it was realized that many organization sometimes adopt this approach of management unknowingly.

As viewed by Carter and Price (1993), any organization in which at least three of the following functions; purchasing, inventory control, production scheduling and control, incoming quality control, warehousing and stores, materials and Technical stores report to a single responsible individual is said to practice the concept. The data analysis below takes this information into consideration.

Table 8: Application of Material Management Com

	upto Ksh 50 million	Ksh 51 million to 500 million	Ksh 501 million to 1 billion	Ksh 1.1 billion to 5 billion	Ksh 5.1 billion and above	Total
	No %	No %	No %	No %	No %	No %
Organization does use materials management	6 60	8 53	9 64	6 67	6 68	35 64
Organization does not use materials management	4 40	7 47	5 36	3 33	1 14	20 36
Total	10 100	15 100	14 100	9 100	7 100	55 100

Source: Research data

The result from table 8 indicates that majority (64%) of the firms were using materials management. As the figures shows 35 of the 55 organization had their material functions organized in accordance to the requirement of the MM concept. The titles given to the person –in-charge of material functions were varying from one organization to another. The titles that were most common were purchasing manager, logistics manager, and general manager. Although some organization had titles like supply chain manager, raw material manager, Management Accountant, Operation manager, storekeeper, works manager and production manager. In some organization, it was the managing director who was in-charge of material functions.

Benefits expected from implementing materials management concept

From the research, the researcher realized that only very few organization had implemented the method knowingly. The following are some of the benefit the companies expected by implementing MM concept.

Improvement in quality of input

By empowering the material manager and making him/her responsible and answerable to the Chief executive officer, the manager will have the power to make decision leading to both competitive and wise buying decision. This is because if the quality is compromised he/she shall be answerable.

No buck-passing of problem

Problem shall be easily traced and dealt with promptly without buck-passing. Department usually have their own specific objective and this sometimes are found to conflict with each other. Therefore if material functions are divided into different department, conflicts are likely to erupt and hence material management comes in as integrator.

Quick response

Quick response leading to improved control of the organization, and quality service to customer. There will be timeliness of deliveries.

Better co-ordination

Encourages and promotes interdepartmental corporation and co-ordination. For example production control working closely with stores in its planning activities. This is seen to result into less interdepartmental conflict.

Optimal stock

The appointment of material manager to be responsible for all aspect of materials functions will make the management come up with the most optimal stock level. There will be savings made by not holding unnecessary stock that could have otherwise tied up capital.

Other benefits

Other benefits mentioned include; stable manufacturing schedules, optimum working capital, management of waste, good representation to leading to effective and efficient information flow, reduction in lead time, proper monitoring of purchase price. According to the report got from the research, almost all the firms that had implemented material management claimed that they had realized the benefit they expected. Actually most respondents were very evasive in telling their weaknesses.

Problems encountered with the Approach

Some respondents (40%) agreed that had some few problems with the approach. Among the problems mentioned here were; that the approach is bureaucratic, two, the approach entrust a lot of sensitive activities to one department, three, the approach required a very magnificent data system. Otherwise majority (60%) of the respondents who answered these questions said they did not have a problem with the system.

Intention of improving the system

This question was poorly answered. In the analysis, it was found that 40% of respondents evaded the question, 25% said no improvement as the system was okay and 35% respondents positive. Among the improvement they mentioned were; computerization of most of the departments so as to be able to get accurate and timely information, wastage analysis and further cutting down of costs.

SUMMARY, DISCUSSIONS AND CONCLUSIONS

This study sort to achieve five objectives namely, to determine level of attention and emphasis the Kenyan manufacturing firms are giving to materials management, to find out the proportion of annual turnover organizations spend on material and materials related cost, to establish the kind of organization structures existing for materials management. The study is also addressed to two other issues. These are; to establish whether the Kenyan manufacturing organizations have adopted the material management concept and for the firms applying it, what benefits and problems have they encounters with the approach.

The result of the study shows that Kenyan manufacturing firms spend an average of 56% of their annual sales turnover on materials and materials related cost. Similar study, which was done in America in 1980 by Center for Advanced Purchasing Studies (CAPS), indicated that America firms were spending 60% of annual turnover on materials. They then embark on serious investigation on how to reduce this. Since this study of 1980, they have given a lot of attention and emphasis on material management. The resultant effect, as been employment in material management system and cost reduction. Regarding the reporting system, only 23% of the firms studied had their person in-charge of material functions, reporting directly to the chief executive officer and the rest were reporting to other management position. These showed that majority (77%) of the firms have not given a lot of recognition to material functions in the organizations. Any organization functions that consume more than half of its turnover need to be given a lot of attention. When the in-charge of material function reports directly to the CEO, this is an indication hat the position is recognized as a top management function. It also indicates that the position is very critical to the organization.

Generally factors which influence the level at which the material functions is place in the organization structure cover a broad spectrum. Among the major ones are:

1. The amount of purchased material and other related costs as a percentage of either total costs or total income of organization. A high ration emphasizes the importance of effective performance of the material function.
2. The nature of the products or services acquired. The acquisition of complex components or extensive use of subcontracting represents difficult purchasing problems. It evident in the Kenyan firms with international influence to be outsourcing some of their purchasing services.
3. The conditions in the market place for those products and services of vital importance to the organization.
4. The talent available for the assignment. Actually this is where most Kenyan organizations have failed because there are very few people trained in purchase and supply management. That implies that many Kenyan Universities and colleges have not recognized purchasing and supply management or materials management as an important career.

5. Lastly, the problems and opportunities present in the purchasing and supply area to achieve organization objectives.

As for the existence of a specific department for material functions, the survey indicated that more large firms had departments dealing specifically with most of the material functions as compared to medium firms. And that, as the organization increases in size the more likely it recognizes the need for such departments. Actually the report indicates that the need for such departments depended more on the amount of material used in an organization, computerization of the firm and how the difficult it is to source materials.

In the case of application of materials management concept, 64% of the firms were found to be using the approach, although most of them were applying it unknowingly. Majority of the firms had material functions performed by general managers and production managers. The titles given to a person performing material functions varied from the organization to another.

The principal benefits expected in using material management concept were; improvement in quality of inputs, reduction in conflict regarding material functions, quick response to demands, better co-ordination, optimal stock level, stable manufacturing schedules, effective and inefficient information flow among others.

Most organization claimed that they had realized most of the benefits they expected from the responses given, and that nearly all organization supported that their system were efficient. This was not absolutely true. Observation made by the researcher showed that there were some problems, which the respondents were not ready to accept.

The problems encountered by the approach were; lack of flexibility, entrusting a lot of sensitive activities with one office and lack of well integrated database system to support information flow. Some respondents argued that the approach was bureaucratic in nature.

From findings of the study, the following conclusion can be made. Firstly, most Kenyan manufacturing organizations have not recognized professionalism in materials management. Most sensitive jobs like purchasing and supply are being done by non-professionals and that is a very great undoing in this harsh global competitive market.

Secondly, as noted from the research, not all organization can manage to adopt this approach of management. It most suited with large organization with a lot of cash employed in materials and with well managed database system. Otherwise small organization sees it a very expensive.

With the tremendous improvements in information technology and communication, materials management is seen to improve in Kenya. The increasing emphasis on the competitiveness has led to a new emphasis on the competitive advantage through effective utilization of organization resources. It is essential to address fundamental competitive through cost reduction, issues like competitive buying, buying wisely, effective and reliable sources of supply, to keep inventory investment and inventory costs at a practical minimum, are the in current business.

The conclusion drawn from the research is that majorities of the Kenyan firms are not practicing professionals in materials management and that materials management was more suited for large firms. Lack of enough people with know-how in materials management locally has actually contributed to lack of recognition of the same. As compared to America and Japan, most Kenyan, firms have a long way to go in-terms of effective and efficient materials management.

5.2 Recommendations

A rising from the finding of the study, some pertinent recommendations can be made. These recommendations are aimed at improving the state of materials management and hence competitiveness of the Kenyan firms.

Owing to the huge sum of money companies spend on materials, a lot of emphasis or attention need to be given to materials management to enable companies achieve best optimal cost structures. Materials management needs to be recognized as a top management function.

Organization need to create a department dealing material functions to enable easy control and monitoring costs related to materials and material related costs. The departments will make it easy to find the person accountable to these costs. The head of that department should be answerable to the chief executive officer to give the in-charge enough clout to control costs.

REFERENCES

- Adam E. Jr. and Ebert R.J (1998) , Production and Operations management: Concept models, and Behavior. 5th edition, Prentice Hall of India Private, New Delhi.
- Barnes David (2008) Operations Management: An International perspective, Thomson Learning, London .
- Bose Chandra D (2007). Inventory Management, Prentice hall , New Delhi.
- Bowersox D.J. and Price P.M(1996). Logistical management. Mc Graw-hill companies, Inc. New York.
- Carter R.J. and Price P.M (1993). Integrated Material Management, Pitman, Publishing, London.
- Chary S.N (2008) , Theory and Problems in Production and Operation Management, Tata McGraw hill New Delhi.
- Chase R.B,Jacobs R.F Aquilano N.J and Agarwal N.K(2009) Operations Management for Competitive Advantage 11th edition, Tata McGraw -Hill , New Delhi.
- Chikan, A. and Demeter, K.(2003) : Some effects of globalization on Manufacturing practice, Society and Economy,Vol.25, No.3 pp.321-335
- Chopra S, Meindl P. and Kalra D.V.(2007), Supply Chain Management: Strategy, Planning and Operation,Pearson, Dorling Kindersley.
- Dobler D. W. and Burt D.N (1996) Purchasing and Supply Management, 6th ed. The McGraw Hill Companies., Inc., New York, .
- Juttener M. Christopher (2000), Supply Chain relationships: Making the Transition to Closer Integration; International journal of Logistics: Research and Applications ; vol.3 No.1 pp. 5-23
- Evans J.R. Anderson D.R Sweeney D.J and Withumus T.A (1987) Applied Production and Operation Management 2nd edition west Publishing Company, St. Paul.
- Fearon H.E.; Ruch W.A and Wieters C.F (1989), Fundamentals of Prodcution /Operations Management 4th Edition west Publishing Company, St Paul.
- Gairther N.(1987) Production and Operations Management, the Dryden Press Chicago.
- Heizer J. and Prender B.(1996) Production and Operations Management: Strategic and tactical decisions, Prentice Hall, Intentional Editions, New Jersey.
- Jacobs R.F, Chase R.B and Aquilano N.J(2009) Operations and Supply Management McGraw Hill Boston.
- Jessop D. and Morrison A. (1994) Storage and Supply materials, Pitman Publishing.
- Leenders M.R; Fearon H.H and England W.B (1989) Purchasing and materials management, 9th Ed. Richard D. Irwin Inc. Homewood.
- Levi D.S. , Kaminsky P. , Levi E.S and Shankar R.(2009), Designing and Managing the Supply Chain: Concepts, strategies and case studies 3rd edition, .Tata McGraw Hill, New Delhi
- Meredith, J.R(1992) The management of Operations: A conceptual Emphasis., John Wiley and Sons, Inc New York,.
- Ramakrishma R.V (May 2005) : Materials Management-profit centre; Indian Institute of Materials Management Journal.
- Waters Donald(2009) : Operations Strategy, Thomson Learning, London .
- Wheel Wrights S.C and Makridakis (1985), Forecasting Methods for Management. 4th edition John Wiley and Sons Inc. New York.
- Wild Ray (1995) Production and operations Management. 5th edition, Cassel, London.
- African Review of Business and Technology, February 1999, Kenya Production Control System.
- The magazine of Purchasing, Procurement and logistics, Chartered institute of Purchasing and Supply(March 2000) by Personnel Publications Ltd., Briton Street, London.