

# Effect of Training on the Effectiveness of Supply Chain Management in the Kenyan Public Sector

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**Abstract:** It is a common practice by most firms to cut or freeze training budget whenever the economic conditions are hard or even suspend training programs altogether. The aim of this study is to find out the effect of training on the effectiveness of supply chain management in the Kenyan public sector. The study adopted a descriptive research design considering a population of 120 and randomly selected 60 respondents. Data was gathered by questionnaires and analyzed by SPSS then Pearson correlation applied to establish the relationship between the research variables. The study arrived at conclusion that the effectiveness of SCM significantly depends on procurement employees training ( $r=0.878$ ). The study recommends continuous training programs of procurement staff on emerging and current issues on the supply chain management.

**Keywords:** Capability, capacity, conversion, knowledge, logistics management, procurement, rules and regulations, skills, training budget.

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## 1. INTRODUCTION

Training is the process of enhancing the skills, capabilities and knowledge of employees for doing a particular job. Training process molds the thinking of employees and leads to quality performance of employees. It is continuous and never ending in nature. Training is given on four basic grounds: (1) New candidates who join an organization are given training to familiarize them with the organizational mission, vision, rules and regulations and the working conditions, (2) The existing employees are trained to refresh and enhance their knowledge, (3) if any updates and amendments take place in technology, training is given to cope up with those changes. For instance, purchasing a new equipment, changes in technique of production, computer impartment. The employees are trained about use of new equipment's and work methods, (4) when promotion and career growth becomes important. Training is given so that employees are prepared to share the responsibilities of the higher level job.

Training Improves morale of employees, leads to less supervision, fewer accidents, and chances of promotion and thus leads to increased productivity. Training is generally imparted in two ways: (1) on the job training methods which are given to the employees within the everyday working of a concern. It is a simple and cost-effective training method. The in proficient as well as semi- proficient employees can be well trained by using such training method. The employees are trained in actual working scenario. The motto of such training is "learning by doing." Instances of such on-job training methods are job-rotation, coaching, temporary promotions, etc. (2) off the job training methods training are provided away from the actual working condition. It is generally used in case of new employees. Instances of off the job training methods are workshops, seminars, conferences, etc. Such method is costly and is effective if and only if large number of employees have to be trained within a short time period. Employees are trained in a separate area, may be a hall, entrance, reception area, etc. known as a vestibule where the actual working conditions are duplicated.

Supply chain management encompasses the planning and management of all activities involved in sourcing, procurement, conversion, and logistics management. It also includes the crucial components of coordination and collaboration

with channel partners, such as suppliers, intermediaries, third-party service providers, and customers. In essence, supply chain management integrates supply and demand management within and across organizations (Lysons, 2008). Public sector institutions collectively spend billions of shillings each year on procuring goods and services, and yet pay little attention to managing and maintaining the assets procured. Contracts entered into for professional and other services, on the other hand, are either poorly managed or not managed at all. Government departments typically over-pay for assets and then seldom maintain or account for them effectively. Asset management has traditionally been limited to control of inventory. Thefts and losses are often not quantified owing to defective inventories, records, and poor systems of control. To compound matters, departments don't plan or budget properly for acquisition and replacement of assets, and don't penalize service providers for non-performance, late delivery and defective quality (Harrison, 2006).

The SCM personnel require continuous training in order to improve their effectiveness in procurement processes. There are different institutions offering training of SCM in Kenya such as middle level certificate and diploma courses, higher levels as in universities and professional bodies such as Chartered Institute of purchasing and supply (CIPS) UK and the Kenya Institute of purchasing and supplies management (KISM). Members in this profession are required to be members of a professional body depending on their level of engagement in practice i.e. student, full member or associate.

**Statement of the Problem:**

In Kenya, over seventy percent (70%) of public sector organizations experience supply chain management challenges and this negatively affects effective delivery of services (Edward, 2008). Effective SCM requires public sector organizations to have trained procurement staff as articulated in the public procurement and disposal act 2005, with an understanding of supply chain management dynamics and an ability to use information based tools (Clerk, 2003). Despite that the government has invested heavily in training and development, the public sector is plagued with delays and process problems. Hence this study is set out to find the effects of training on the effectiveness of SCM in the public sector.

**Objective:**

The main objective of the study was to find out the effect of training on the effectiveness of supply chain management in the public sector, a case study of the Ministry of Finance. The study seeks to answer the question; *how does training affect the effectiveness of supply chain management?*

**Limitation of the Study:**

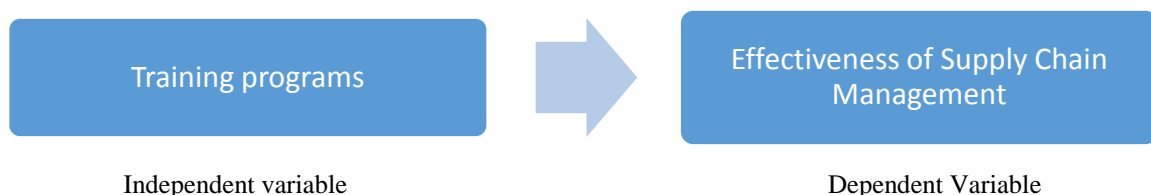
The organization confidentiality policy may have restricted most of the respondents to answer some of the questionnaires since it is against the governments' confidentiality policy to expose the organization confidential matters.

## 2. LITERATURE REVIEW

Training is the process of enhancing the skills, capabilities and knowledge of employees for effective execution of procurement functions (Abraham, 2009). Effective SCM requires managers to have an understanding of supply chain dynamic and an ability to use information based tools. (Lee, 2000) contended that information visibility throughout a supply chain will not bring significant impact if companies do not have capabilities to utilize the information in effective ways. Hence, companies need to consider the skills requirements and education when integrating their value adding activities with their partners.

**Conceptual Framework:**

There are many factors can affect the SCM effectiveness such as supplier relationship, inventory management, information technology, training and distribution, procurement laws, etc. This paper considers one of the factors namely the effect of purchasing personnel training on the effectiveness of supply chain management practices in the ministry of finance. The construct and relationships between research variables are illustrated in the following figure 2.1.



**Fig 2.1 Conceptual Framework**

### ***Supply Chain Management:***

Supply chain management (SCM) is "the systemic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole, Mentzer, John T *et al*, (2001) It has also been defined as the design, planning, execution, control, and monitoring of supply chain activities with the objective of creating net value, building a competitive infrastructure, leveraging worldwide logistics, synchronizing supply with demand and measuring performance globally. APICS Dictionary (Retrieved 19 June 2013). The key supply chain processes stated by Lambert (2004) are: customer relationship management, customer service management, demand management style, order fulfillment, manufacturing flow management, supplier relationship management, product development and commercialization and returns management.

### ***Training:***

According to Resource Based Theory resources are inputs into a firm's production process; can be classified into three categories as; physical capital, human capital and organizational capital (Crook, 2008). A capability is a capacity for a set of resources to perform a stretch task of an activity. Each organization is a collection of unique resources and capabilities that provides the basis for its strategy and the primary source of its returns. In the 21st-century hyper-competitive landscape, a firm is a collection of evolving capabilities that is managed dynamically in pursuit of above-average returns. Thus, differences in firm's performances across time are driven primarily by their unique resources and capabilities rather than by an industry's structural characteristics (Crook, 2008).

Scott (2003) asserted that employee training and development is essential to the ongoing success of every organization supply chain functions. Although technology and the internet have enabled global collaboration and competition, people are the organization's competitive advantage. Employee training and development enables employees to develop skills and competencies necessary to enhance bottom-line results for their organization supply chain management function. Employee Training and Development is a key ingredient in supply chain performance improvement. However, the first step in designing an employee training and development program is to identify the training needs. Zhang (2004) contended that lack of professional trained staff on supply chain management lowers the level of effectiveness on SCM practices; the training needs are based on what is needed to achieve the organization's strategic objectives.

Supply Chain Management Training is an innovative procurement management development programme that has been specifically designed to maximize the potential and professionalize the role of supply chain managers. The blended learning programme offers a methodical approach to supply chain management development by utilizing an online portfolio support system allowing candidates to work at their own pace, at the most convenient time and location for themselves (Patterson,2005).

According to Gartona (2006) the aims of the Supply Chain Management Training are to; upgrade the skill levels of existing staff, develop procurement management skills, allowing personal development while delivering organizational development, to professionalize the role of the supply chain manager, improve skills in activities, resources, people and information management, allow good practice to be cascaded throughout the organization as work is based on standards devised by the Chartered Institute of Purchase and Supply (CIPS),achieve a nationally recognized professional qualification, Vocational Qualification (VQ), which can lead to membership of professional body (CIPS)

Abraham (2009) argued that training is given on four basic grounds; new candidates who join an organization are given training to familiarize them with the organizational mission, vision, rules and regulations and the working conditions, the existing employees are trained to refresh and enhance their knowledge, If any updating and amendments take place in technology, training is given to cope up with those changes. Armstrong (2006) affirmed that the benefits of training can be summed up as; Improves morale of employees since training helps the employee to get job security and job satisfaction. The more satisfied the employee is the greater is his morale; the more he/she will contribute to organizational success and the lesser will be absenteeism and turnover. Less supervision since well-trained employee will be well acquainted with the job and will need less of supervision. Thus, there will be less wastage of time and efforts.

According to Roland (2007) training as a major investment that must clearly be linked to identifiable business needs. Training is often seen as the process of equipping people for improved or better performance towards achieving original objectives. Roland (2007) confirms that in most organizations today, resources are scarce and have to be used carefully. Time is of the essence and trainers of all kinds are required to justify their positions and account for the activities. Roland

highlighted some possible outcomes of the training known as information group for individual and organization development.

**Empirical Review:**

The effectiveness of supply chain management practices in many organizations has been a center of debate amongst various procurement and logistics professionals around the world (Goldstein, 2006). According to Harmon (2010) many organizations supply chain management practices are characterized by high level of inefficiency and effectiveness and not much emphasis have been made to explore the key impediments affecting the same.

Hines (2004) found out that supply chain strategies require a total systems view of the linkages in the chain that work together efficiently to create customer satisfaction at the end point of delivery to the consumer. As a consequence costs must be lowered throughout the chain by driving out unnecessary costs and focusing attention on adding value. Throughout efficiency must be increased, bottlenecks removed and performance measurement must focus on total systems efficiency and equitable reward distribution to those in the supply chain adding value. The supply chain system must be responsive to customer requirements. Bowersok (2000) noted that in USA organizations that lacks IT systems like Enterprise Resource Planning and computerized distribution systems experiences high level of inefficiency and ineffectiveness of the organization supply chain management processes.

Lyman (2007) noted that in Botswana, the major purchasing and supplies challenges facing public sector organizations includes; lack of supplier evaluation, lack of trained purchasing personnel, lack of recognition of purchasing and supply function as a profession, lack of market surveys before execution of purchasing functions, top management (excluding purchasing) is responsible for purchasing and supply planning, some officers do not complete stores requisition forms, Poor location of the purchasing and supply functions and poor inventory management.

**3. RESEARCH METHODOLOGY**

The study adopted a descriptive case research design. The study gathered both quantitative and qualitative data that described the nature and characteristics of factors affecting the effectiveness of supply chain management practices in the ministry of finance. The study population comprised of 120 management staff working at the Ministry of finance. Random sampling technique was applied to select a sample size of 60 respondents. The Statistical Package for Social Sciences (SPSS) computer software was used for analysis to generate data array that was used for subsequent analysis of the data. Pearson correlation was used to establish the relationship between the research variables.

**4. RESEARCH FINDINGS AND DISCUSSION**

***Do you think SCM personnel have training on effective execution of SCM functions?***

The question aimed to find out if the respondents were professionally trained on effective execution of supply chain management functions and the obtained findings were presented in table 4.1 Table 4.1 thus shows majority (67%) of the respondents expressed that the respondents were not professionally trained on effective execution of supply chain management functions and only 33% of the respondent who differed with majority and explained that they were professionally trained on effective execution of supply chain management function. The respondents explained that employee training and development influences employees to develop competitive skills on effective execution of supply chain management functions and this supported findings by Scott (2003) that employee training and development enables employees to develop skills and competencies necessary to enhance bottom-line results for their organization supply chain management function.

**Table 4.1 Effect of training on effective execution of supply chain management functions**

<b>Response</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	16	33%
No	32	67%
<b>Total</b>	<b>48</b>	<b>100%</b>

***Extent of the effect of training on the effectiveness of SCM:***

The study aimed to determine the extent to which training affected the effectiveness of the organization supply chain management practices. The findings were presented in table 4.2. Table 4.2 hence shows that 54.2% of the respondents felt

that training affected the effectiveness of the organization supply chain management practices to a very large extent, 20.8% stated large extent, 14.6% moderate extent, 6.3% small extent and 4.2% not at all. The respondents affirmed that application of supply chain management training program encouraged procurement managers to gain more competitive skills on SCM issues and maximize the potential and professionalize their role as supply chain managers. This supported argument by Patterson (2005) that Supply Chain Management Training is an innovative procurement management development programme that has been specifically designed to maximize the potential and professionalize the role of supply chain managers.

**Table 4.2 Extent of the effect of training on SCM**

Response	Frequency	Percent
Very Large extent	26	54.20%
Large extent	10	20.80%
Moderate Extent	7	14.60%
Small extent	3	6.30%
Not at all	2	4.20%
Total	48	100%

**Issues of training:**

The study wanted to measure the rate at which the respondents agreed on different issues of training. Using likert scale of (5= strongly agree, 4 = agree, 3 = neutral, 2= disagree, 1 = strongly disagree), respondents were requested to indicate how they agreed on the issues of training practices. The obtained findings were presented in table 4.3. The table 4.3 hence presents that a mean of 4.25 indicates that respondents agreed that employee training and development is a key ingredient in supply chain performance improvement, a mean of 4.56 shows respondents agreed that lack of professional trained staff on supply chain management lowers the level of effectiveness on SCM practices, a mean of 4.64 shows that respondents agreed that training improves the level of employees competency in execution of SCM practices and finally a mean of 4.04 shows that respondents agreed that training promotes application of effective SCM strategies. These findings agreed with Scott (2003) that employee training and development is a key ingredient in supply chain performance improvement and Zhang (2004), that lack of professional trained staff on supply chain management lowers the level of effectiveness on SCM.

The table 4.3 also shows that a low variance and standard deviation on all the issues of training was obtained and this was an indication that the respondents gave accurate and reliable answers. This contended with findings by Joppe (2000) that a narrow difference between variance and standard deviation on respondent’s answers is clear indication of reliability and accuracy of the respondents answers on issues surrounding the research problem.

**Table 4.3 Issues of training**

Issues of training	N	Mean	Std. Deviation	Variance
Employee Training	48	4.25	0.72932	0.532
Lack of professional trained staff	48	4.5625	0.64926	0.422
Level of employee competency	48	4.6458	0.63546	0.404
Training promotes SCM strategies	48	4.0417	0.87418	0.764
Valid N (listwise)	48			

**Inferential Statistics:**

The study subjected the gathered data to inferential statistical tool, thus correlation analysis. Correlation analysis is used to determine how strongly the scores of two variables are associated or correlated with each other. Table 4.4 shows that the independent variable has a strong positive correlation with effectiveness of SCM (r = 0.878). This correlation was found to be statistically significant at 0.01 significance level (p-value = 0.000).



**Table 4.4 Correlation Analysis Results**

Variables		SCM	Training
SCM	Pearson Correlation	1	.878**
	Sig. (2-tailed)		0
	N	48	48
Training	Pearson Correlation	.878**	1
	Sig. (2-tailed)	0	
	N	48	48

\*\**. Correlation is significant at the 0.01 level (2-tailed).*

## 5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The study identified that training was a very critical factor on the effectiveness of the organizations' supply chain management. Training determined the level of competency exhibited by the organizations' employees during execution of the SCM functions. Some of the organizations' procurement employees were found to lack academic qualifications in procurement field and this hindered developing and employing skills and competencies that increased SCM effectiveness. This supported findings by Scott (2003) that employee training and development enables employees to develop skills and competencies necessary to enhance bottom-line results for their organizations' supply chain management function. It was finally noted that employee training and development is a key ingredient in supply chain performance improvement and lack of professional trained staff on supply chain management lowers the level of effectiveness on SCM.

### **Conclusion:**

Lack of professional trained staff on supply chain management lowers the level of effectiveness on SCM since employees lack competitive skill on effective implementation of SCM strategies

### **Recommendations:**

The ministry should recruit competent staff with professional qualifications in procurement related fields and employ continuous training programs on emerging and current issues on the supply chain management. Induction programs should be introduced to new employees and on job training should be continuously carried out to equip procurement staff with more knowledge and skills on effective execution of supply chain management functions.

### **Suggestions for Further Studies:**

A suggestion for further studies is encouraged to explore,

1. The effect of different training methods on SCM effectiveness,
2. Quality standards and sourcing strategies on SCM effectiveness
3. Effect of service level agreements on SCM effectiveness.

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