

**EFFECTS OF SUPPLY CHAIN MANAGEMENT  
PRACTICES ON ORGANIZATIONAL PERFORMANCE  
(A CASE STUDY AT WORLD VISION ETHIOPIA,  
ETHIOPIA)**

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**Abstract**

Today's globalized economies every activity in the organization is much important for its successes. It is not only the core functions of management like marketing, production, finance and human resources but also the supply chain management practices are much important. This research has analyzed the effect of Supply Chain Management practices (SCMP) on organizational performance at world vision Ethiopia. The objective of this study is to assess the effect of supply chain management practices (SCMP) on organizational performance. The study used both primary and secondary data. Primary data was collected from field survey using questionnaire. To support the primary data secondary data also collected from various published sources like books, journals, magazines and related websites. Data was analyzed with both descriptive and inferential statistics to assess the supply chain management practices of World vision Ethiopia. The study revealed number of supply chain practices like suppliers relationship management, customers relationship management, supply chain integration, supply chain responsiveness and information sharing with others in World vision Ethiopia. However, the

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study identified some challenges such as inadequate information system, difficulty in coordinating all functions. In view of the enumerated challenges, the researchers recommend that, the organization should focus on proper supply chain management and must have information sharing among all functions of supply chain management.

**Key word: Supply chain management, supply chain management practices, organizational performance, World vision Ethiopia (WVE)**

### Introduction

Supply chain management has gained global importance for the past decade due to global competitive business environment. Number of companies on supply chain management is expanding both locally and globally. Organizations are facing different kinds of challenges in their effort to compete today's supply chain management practices. To remain competitive, organizations must recognize the importance of supply chain practices that improve not only their own organizational performance, but also coordinate with their supply chain partners to improve the overall performance. Companies not only establish themselves to produce higher-quality products and services, decrease waste, respond to the market needs but also handle their supply chain management practices efficiently. Manufacturing companies are effectively integrating all internal factors with external suppliers and customers in order to achieve better performance and higher customer satisfaction. The supply chain management practices include integration, responsiveness, customer's management, supplier's management and information sharing that ensures the overall performance of the organization. The study mainly focuses on supply chain management practices adopted to bring the overall objective of supply chain management channels set in the organization expected to increase organizational performance in effective and efficient manner.

### Objectives of the study

- To study the current supply chain management practices of the company.
- To assess the effect of supply chain management practices on organizational performance.

- To study the significant relationship between supply chain management practices and organization performance.

### Scope of the study

The study is confined to effects of supply chain management practices on organizational performance at world vision Ethiopia. It is a Non-governmental organization working for the upliftment of poor and rural population in most of the developing and underdeveloped countries in the world including Ethiopia.

### Methods and methodologies

For bring this research much effective two types of data has collected i.e., primary and secondary data. The primary data was collected through field survey using self-administered questionnaires for sample employees. The population includes the staff members working in the area of supply chain at the world vision office. This includes Procurement, Transport, Warehouse, Finance, Communication and Administration units. The Primary data collected from National office and field offices from various parts of the country by distributing questionnaires through electronic mail and face to face to interviews are also taken from the officials of the organizations. To support the primary data secondary data also collected from books, journals, articles and internet. The study relies more on quantitative research. Explanatory research design was used. Research was used to explore the facts that supply chain management practices interact within the organization to fully make why in supply chain management and directly effects on organizational performance.

### Review of Literature

The literature of SCM was born on its practical positive impact on firm's performance. Early research used to report anecdotal evidence about firms that had adopted the supply chain management approach and how this resulted in benefits of the firm and other supply chain members For effective supply chain management practices various factors like shorter product lifecycle, customer expectations. Businesses have had to invest and re-focus greater attention on relationship with customers and suppliers. Eventually an organizations supply chain has become a strategic agenda driving decisions making at senior level managements. (Simchi-Levi et al.

2000). This suggests that every single company depends on other businesses to deliver its products or services to its customers (Ayers, 2001). Additionally, information and communications technology such as e-commerce becomes the backbone of these integrated supply chains practices in recent times (Lancioni et al. 2001; Porter 2001). Being able to create business relationships with customers, suppliers and other strategic partners anchored on trust and long term commitment SCM becomes a crucial competitive parameter (Mattson 2002). Great part of this literature was descriptive, reporting practices of successful companies. The development of the SCM field was largely practitioner-led with theory following (Voss, Tsiriktsis, & Frohlich, 2002). However, several external factors continue to strive the organization to adopt the new way of conducting businesses i.e. increasing globalization, decreased barriers to international trade, improvement of information availability through information technology and increasing customer demand (Sahay & Mohan, 2003; Gunasekaran et al. 2003). In order to survive companies must be able to reduce cost, improve quality and provide fast response to the customer needs. One of the ways of achieving that competitive edge is through the implementation of SCM practices (Muhammad, 2004). According to China Textile Planning Institute of Construction (2004), the sector suffers significant problems of logistics, market information and warehouse facility. Under such conditions, the raw materials and final products face quality deterioration. This poor quality of raw material leads to low competitiveness of the textile firms. Burgess, Singh and Koroglu (2006) reviewed the most often used theoretical perspectives in the SCM literature, reporting that 20% of the articles had no discernible theory present. One of the relevant theoretical supports for the positive relation between SCM and performance is the resource-based view (RBV) and its extensions. The nature of competition has also changed to the extent that companies no longer compete against other companies on the bases of quality as traditionally practiced in the 1980s (Fawcett et al. 2007). Also Rahel, (2007) stated that Ethiopian textile firms faced problems that hinder their competitiveness in the global and local market. According to her, their major challenges are: the absence of well developed supplier customer relationship, lack of access to international market, information, technology, outdated product processing facilities, lack of raw materials, accessories, suppliers, paved roads, communication, infrastructure, and other services. However, the new source of business competition lies outside the walls of an organization and is determined by how effectively companies link their operations with their supply chain partners

like suppliers, distributors, wholesalers, retailers and end costumers. (Petrovic-Lazarevic et al. 2007). According to Baharanchi (2009), an integrated supply chain is linked organizationally and coordinated with information flow, from raw materials to the on-time delivery of finished products to customers. The entire supply chain is linked by information about anticipated and actual demand. There are two interrelated forms of integration that manufacturers regularly employ. The first type of integration involves integrating the forward physical flow of delivery between suppliers, manufacturers and customers. The second type of integration involves the backward integration of information technologies and the flow of data from customers to suppliers. For supply integration, integration back down to the suppliers represents a change in attitude away from conflict to cooperation, starting from product development, the supply of high quality products, process and specification change information, technology exchange and design support (Baharanchi, 2009). According to Admaw, (2010), Ethiopian textile firms have been operating for a long time. However, textile firms are weak and do not use SCM as competitive weapon. In terms of relationship between SCM practices and competitive positioning, it was found that internal operation flexibility practice positively impacts on the competitive positioning in most of the textile firms. Strategic supplier partnership, customer relationship and information sharing were not influential in increasing competitive positioning of firms. They need to focus on supply chain management practices that have impact on enhancing SCM activities and ultimately performances of the business. (Arawati, 2011) There are studies that are done in the area of supply chain in textile industries such as Salem (2011) and Fasika B, et al.,(2014).

### **Sample size and sampling technique**

Sample frame for the study is the logistics and supply chain department of the organization working with the supply chain management practices. The total population of staff members found in this unit located at national office and field offices was one hundred fifty (150). By using Yamane (1967) formula  $n = N/1+N(e)^2$ , the sampling size was one hundred nine (109) choosing through probability sampling technique. The respondents were chosen based on their work location working in supply chain management units of World vision Ethiopia. Each work location is considered as a stratum. For selecting the strata's simple random sample technique was used.



**Table-1**

**Stratum in supply chain department of the organization**

Source of data	Population stratum	Proportion to sample size
Stratum 1: National office supply chain unit	30	$(109/150)*30=22$
Stratum 2: Cluster program office supply chain unit	120	$(109/150)*120=87$
Total	150	109

(Source: own survey, 2015)

**Results and discussion**

The data was analysed and presented by using regression analysis to check the significant relationship between supply chain management practices and organizational performance. It is assumed that independent variables are supply chain management practices and the dependent variable is organizational performance. It described detailed questions related to supply chain management practices.

**Regression analysis - supply chain management practices and organizational Performance**

The multiple linear model was developed with the equation of  $y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_5x_5 + \epsilon$  to derive whether the supply chain management practices have an effects on organizational performance or not. This is to seek the predictors relationship have on organizational performance.

Where

Y is the dependent variable (organizational performance)

$\beta_0$  is the constant or y-intercept

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$  are the coefficients of independent variables  $\epsilon$  is an error

$X_1-X_5$  independent variables

$X_1$ - Suppliers relationship management

$X_2$ - Customers relationship management

$X_3$ - Supply chain integration

$X_4$ - Supply chain responsiveness

$X_5$ - Information sharing

E- Errors

To apply the equation, each  $X_i$  score for an individual case was multiplied by the corresponding  $B_i$  value, the products were added together and the constant  $B_0$  was added to the sum. The result was the predicted  $Y$  value for the case. For a given set of data, the values for  $B_0$  and the  $B_i$  are determined mathematically to minimize the sum of squared deviations between predicted scores. In this case, the regression coefficients for following values are as follows,

**Table -2**

**Model summary for regression**

Model	R	R square	Adjusted R Square	Std. Error of the Estimate	Sig. F Change
1	0.811a	0.658	0.132	0.41411	0.001

(Source: own survey, 2015)

The results in table-2 indicated that the regression  $R=0.811$  shown a high strength of relationships between independent variables and the dependent variable. The coefficient of determination,  $R^2=0.658$  shown the predictive case of the model and in this case, 65.8% is explained by the independent variables. The adjusted coefficient of determination  $R^2$  adjusted=0.132 shown the predictive power after factoring in the effects of some variables with low explanatory power or degree of freedom. In this case 65.8% organizational performance was explained by the independent variables. Finally the standard error of estimate is 0.41411.

**Analysis of variables**

Analysis of variance was carried out to determine if a statistically significant difference in mean occurs between the independent variable and the dependent variables.

**Table – 3**

**ANOVAs analysis between independent and dependent variables**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	14.062	5	2.812	4.272	.001b

Residual	67.809	103	.658		
Total	81.871	108			

(Source: own survey, 2015)

a. Dependent Variable: organizational performance

b. Predictors: These are constant, supply chain responsiveness, supplier's relationship management, supply chain integration, information sharing, and customer's relationship management. Table-3 has shown the results were the F ratio is 4.272 with p value 0.001significance. This means there was not much difference in means between dependent and independent variables. The sum of squares gives the model fit. It explains that the data set fits into regression model. These variables statistically significantly predicted,  $p=.0001$ ,  $R^2=0.658$  three of variables such as suppliers relationship management, supply chain responsiveness and information sharing added statistically significantly to the prediction,  $p < 0.05$ .

**Coefficient of variables in the model**

**Table -4**  
**Coefficients**

Model		Un-standardized Co- effs		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.860	.304		9.409	.000
	Suppliers relationship management	-.316	.138	-.294	-2.288	.024
	Supply chain integration	-.160	.111	-.187	-1.451	.150
	Customers relationship management	-.026	.147	-.029	-.179	.858
	Information sharing	.342	.127	.355	2.682	.009
	Supply chain responsiveness	.419	.214	.383	1.954	.053

a. Dependent Variable: Organizational performance

(Source: own survey 2015)



The beta values guides on interpreting the adjusted  $R^2$  and show the contribution of every variable to explanation. Table -4 shows that regression coefficient of  $B_1$ ,  $B_4$ ,  $\beta_5$  those variables whose coefficients are statically significant such as suppliers relationship management, supply chain responsiveness and information sharing plus their corresponding beta values.

As table-4 represents, with 10% level test the parameters indicate in the model and those were significant for the model are as follows with its p-value.

Constant	P- value (0.000)
supplier's relation management	P- value (0.024)
Information sharing	P- value (0.009)
Supply chain responsiveness	P- value (0.053)

Thus the regression equation then simplifies to:  $Y = 2.860 - 0.316x_1 + 0.419x_4 + 0.342x_5 + 0.414$

From the model developed above, it can be concluded that when supplier relation management increases by 1 term, the organization performance is decreased by 0.316, when supply chain responsiveness increases by one unit the organizational performance increased by 0.419 units and when information sharing is increasing by one unit the organizational performance is increased by 0.342.

### Conclusion

From the results achieved by data analysis, supply chain management practices applying in World Vision Ethiopia has been identified. These supply chain management practices applying in the organization are information sharing, supply chain responsiveness, customers relationship management, suppliers relationship management, supply chain integration and inter functional coordination. The other interesting finding obtained from analysis is that some of the supply chain management practices like supply chain responsiveness, information sharing and suppliers relationship management have high effects on organizational performance. Supply chain responsiveness is the ability of supply chain to respond purposefully and within an appropriate time frame to end users. As the analysis indicates supply chain responsiveness is the most important parameter which has an effects on organizational performance since World Vision Ethiopia is humanitarian organization which responses natural and manmade disasters. The

objective of humanitarians' organization is to save life, alleviate suffering and maintain human dignity. Supply chain responsiveness has a great role to address those who are oppressed and depressed due to unexpected event in their lives. This effect can be reflected through need identification, know the suppliers based on the identified need and delivery them within time frame with low cost. Information sharing is the other finding which has high effect next to supply chain responsiveness. Information sharing helps diverse members of a supply chain to work together efficiently and effectively. This enables an organization to collect, analyze, and disseminate information among members of the chain to improve decision making and connecting managers across functional and organizational boundaries and providing them with relevant, accurate, and timely information reduces temporal and spatial distance enabling them to make better, more collaborative decisions. Suppliers' relationship management is third supply chain management practice which has an effect on organizational performance. The goal of supplier's relationship management (SRM) is to streamline and make more effective processes between an organization and its suppliers which help to address the beneficiaries within the time frame and low cost. Correlation analysis also reveals that even though the organization is implementing cross functional processes and integrating them with key members of supply chain. It is important for the organization to know clearly the impact of each members of supply chain on organizational performance and how they are linking together to get optimal benefit expected from supply chain management. Finally descriptive analysis indicates that there is an effect of supply chain management on organizational performances. These effects are measures of socio-economy of end users. It measures the progress obtained from support, reduce lead time with cost, identify the need of quality service and quick response, improve delivery and fulfil objectives.

### **Recommendation**

The current research provides empirical justification that identifies supply chain management practices which have an effect on organizational performance and how these supply chain management practices are interrelated to assure the effective and efficiency of supply chain management in the organization. Among supply chain management practices supply chain responsiveness, information sharing and suppliers relationship management are those which have high effects on organizational performance.

Based on the evidential justification, the research recommends well management of these identified supply chain management practices to obtain its positive effects to enhance organizational successfulness.

The second concern is the relationship of all supply chain management practices they have in World Vision Ethiopia. This is clearly indicated in correlation testing that even though the relationship among these supply chain management practices exist, information sharing among the members of supply chain need great focus.

The need to share information across the various entities along the supply chain is definitely of paramount importance.

As this research analysis and interviews conducted with managers indicates there is pathetic information sharing along supply chain management. The interviewers indicated that flow of information in projects like procurement and warehouse is very weak. As function managers confirmed during interview, needs are raised from end users through project staff and submitted to procurement function for purchase process. Then procurement function process the purchase activities and finally the procured items delivered to either central warehouse or the specified project warehouse. Throughout all these processes there is no information sharing within the functions of supply chain management in providing the needed items to the end users.

The availability of needed items is not checked from all the project warehouses or central warehouse before requested items are approved in procurement plan. Procurement functions does not engage in procurement planning and distribution of items to end users or it has no information for the items purchased but handle purchase process and deliver to warehouses. Even inventories may store for a long period of time before distribution.

This paper strongly recommends that the organization has strong information sharing system along with all supply chain management functions which promotes more integration among functions that make supply chain management more effective and efficient. The researcher also recommends on supply relationships and integration. The cross organizational interaction and exchange between the participating members of the supply chain should exist. This helps an

organization to have identified tasks in each member of supply chain and controlling system for the department to have an effective and efficient supply chain management that can affect organizational performance. In addition to considering the outcome of this thesis, other researchers can further find out the contribution of each function in supply chain management and to whom each function is going to report.

### Limitations of the study

The study mainly focused on the effects of supply chain management practices on organizational performance. The study is confined to the world vision Ethiopia. The conclusion derived from the study is applicable to the study organization alone. It may or may not be suitable for the other organizations. Proper care has been taken to avoid biased answers and opinions from the respondents, still no conformation towards the information supplied by the organization may be biased. The conclusions are based on the information provided by the managers and employees of the organization.

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