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# Potential Challenges in Logistics Outsourcing and their Impact on Supply Chain Management

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## Abstract

Logistics outsourcing is one of the common practices of the Supply Chain Management (SCM) and has proven to be effective to build competitive advantages in organizations. The academic literature has contributed to the effectiveness of logistics outsourcing in SCM. However, few studies have addressed the potential challenges faced in effective implementation of the relationship. Therefore, the current study aimed to address the challenges involved in logistics outsourcing and investigated the extent to which these challenges effect supply chain performance. The results revealed that challenges of warehousing, outsourcing inefficiency, and accountability significantly affect supply chain performance of food industries in Karachi. However, loss of control and security and track and trace gaps does not have a significant effect on supply chain performance. This indicates that industries should have a special focus on the challenges of warehousing, efficiency of outsourcing, and accountability in logistics outsourcing.

**Keywords:** challenges, logistics outsourcing, supply chain performance, Supply Chain Management (SCM)

## Introduction

In recent years, a considerable change has been observed in the profile of the consumer, who has become more demanding and seeks more qualified services (Brdulak & Brdulak, [2021](#)). This scenario highlighted logistics outsourcing, which has been a constant option for companies in the sector. However, the decision to hire a logistics partner or not is quite serious and needs to be preceded by a considerable number of studies and market researches (McIvor et al., [2019](#)). A wrong choice could represent serious damage to reputation and profitability and, therefore, it is necessary to be safe and know the pros and cons of outsourcing. The current research aimed to put together the elements that companies need to analyze before entering

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into a partnership. With the approval of recent outsourcing law, the food industry is growing and attracting more followers (Vernalha & Pires, [2005](#)).

Cost reduction logistics is one of the areas that most consume capital within a company. In a carrier, this expense is even more accentuated, since the focus of its activity is precisely on logistics operations. On the other hand, hiring an outsourced company to handle any of these services helps control and significantly reduce expenses of the firms. In short, with outsourcing, there is no need to invest in acquisitions and technology development and still reduce the number of hired labor. The result is a carrier operating efficiently, however, with controlled costs. Companies can totally focus on core activities and do not have to worry about other responsibilities than those related to main activity which is another benefit that needs to be highlighted (Daugherty, [2011](#)).

Outsourcing logistics services helps transfer all responsibility for the service to partner and dedicates companies exclusively to work, showing more focus and motivation to innovate and expand performance. For instance, a carrier may hire management software and not have to worry about bureaucracy and difficulty working with numerous spreadsheets, reports, and manual controls. With that, companies would have more chances to compete and win market. Better quality of services provided to experienced companies is an option that gives more quality to performance (Diabat et al., [2013](#)).

An efficient logistics partner has a lot to contribute; therefore, to attract and retain more demanding customers, outsourcing can be essential. Every entrepreneur in the logistics industry aims to make their processes simpler, faster, and more efficient. These factors are essential to achieve good results and can be provided with outsourcing. In general, the entire business is able to operate in a more simplified and qualified manner, reducing errors in operations and waste of resources, whether financial or human. Despite the advantages mentioned, it is important for the entrepreneur to know the possible negative points that this choice presents. In fact, most of the points are related to the choice of the logistics partner, and not the strategy itself. Therefore, it is necessary to know the disadvantages before investing in a partnership in the logistics area (Bryson et al., [2020](#)).

With the growth of outsourcing in the country, numerous logistics services companies have developed in the market. However, not all of them

provide good services which is one of the biggest challenges for businessmen in the industry (Purells Innovative, [2024](#)). Finding a company that is committed to contributing to the growth of the business is not a simple task and requires spending a considerable amount of time researching and evaluating the proposals. High price variation between companies is another negative point that can be encountered when looking for an outsourced company. This is mainly due to differences in the services and products offered. Certainly, companies that charge well below the average and also those that charge above that amount are available in the market. The important thing is to carefully evaluate the cost and differentials that the company offers, since cheap is not always the best option. Fall in the pace of work due to the outsourced company. This disadvantage is related to the first one presented and is concerned with the drop in quality and productivity when hiring a company with no experience and required qualification. Therefore, careful decision-making is essential which prevents the occurrence of such situations. There are excellent logistics service providers, with innovative and efficient products. Hence, it is important to be aware of all the points that may affect income (Ellram et al., [2008](#)).

Moreover, there is also a need to focus on cultural differences between companies (Priyarsono et al., [2023](#); Tagscherer & Carbon, [2023](#)). Each business has its own way of functioning, that is, an organizational culture (Gallup, [n.d.](#)). Thus, it is possible that the outsourced company may have different values and strategies than yours, which could generate a shock between two businesses. However, this problem can be avoided if, before signing the contract, companies conduct research and evaluate about having a future partner. Furthermore, priority should be given to those who work with the same focus as the company as well as who have an ethical and responsible view of the final consumer. This is a strong trend for the coming years and, despite the negative points, it is possible to close a good contract, as long as companies invest in market research to find the ideal company. The increasingly accelerating transformations taking place in the modern world have profoundly altered the modern war, generating new techniques, tactics, and procedures in all fields. In other words, this means that the same psychosocial, political, economic, scientific, and technological forces that are transforming society and the economy, are bringing considerable developments. It becomes increasingly necessary to transform the structure and the doctrine. This is because, what is now

publicly said or written, is obsolete. Logistics aims to forecast, provide, and maintain forces in combat. Furthermore, it must have a basic premise at its feasibility, based on the existence of real means of mobilization within the conditions of time and space delimited by operational planning.

### **Literature Review**

Wanjiru ([2013](#)) suggested that most of the companies demand logistics outsourcing due to the structural changes that lead companies towards reduced budgets, downsizing, and reduced staff. The decision to transfer business functions to external entities plays a crucial role in the strategic alignment of firms. The core elements of the above-mentioned research were not only to explain the motivating factors in logistics out sourcing, however, it also determined the potential challenges that occur during the process of logistics outsourcing. The research was limited to manufacturing companies of Kenya, utilizing a sample survey research design of the importers. The population comprised 455 companies from the manufacturing industry in Nairobi. A self-administered questionnaire with both open-ended and close-ended questions was utilized to collect primary data. The researcher utilized descriptive statistics to analyze the data. Results revealed that the reasons behind outsourcings are the key factors that determine the effectiveness of outsourcing activities. Moreover, the extent to which challenges are faced by the firms also determine the decisions to outsource in the firms. The study recommended that the manufacturing firms in Nairobi should be focused more on business functions that ensure the reduction of overhead costs. Advantages of external experience and expertise should be considered in order to facilitate internal capabilities and expertise of the firms. Organizations can reduce the total overall costs if decisions are made considering all the challenges and where third-party logistics providers deliver effective services. Improved customer focus should be emphasized and measures must be taken by the firms to compete effectively in the market (Tsai et al., [2012](#)).

Aziz et al. ([2020](#)) studied the impact of logistics outsourcing and logistics capability on the firm performance in manufacturing companies of Pakistan. The effects of logistics capability on firm's performance were examined and it was studied how outsourcing is essential and how can a firm receive benefits from outsourcing activities to establish their own logistics capability. The study utilized a survey design based on a structured questionnaire. Primary data was collected for analysis. The population

included logistics experts from manufacturing companies in Karachi, Pakistan with head offices based in Karachi, that have their own logistics or outsource their logistics. The questionnaire was distributed among 500 respondents in head offices of 113 manufacturing companies located in Karachi. The statistical technique of confirmatory factor analysis was utilized to determine the internal consistency of the tool. Moreover, Structural Equation Model SEM was utilized to identify the effect of logistics capability on firm's performance. The research examined the role of logistics outsourcing as a mediator. The results indicated that logistics capability has a positive effect on the firm performance.

It is essential that logistics also undergo profound transformations to adapt with the changes of modern conflicts. Otherwise, it would decisively compromise the success of operations. Outsourcing is a reality in the modern world. This is also true for many important companies which are constantly involved in situations of crisis or conflicts. There is already a wide and diversified industrial and service base in Pakistan, which can meet the logistical needs of operations. However, the use of outsourced companies to provide logistical support in operations must take into consideration a series of operational, doctrinal, legal, technical, and financial factors, among others, in order to become a tool that multiplies the combat power troops, increasing the flexibility and elasticity of logistics. Thus, the current research aimed to study the doctrinal changes necessary to the logistics functions, in order to enable the employment of companies, that is, to outsource logistics services in support of operations. Furthermore, it sought to demonstrate an urgent need for the integration of these service providers in doctrine and logistical planning in order to provide necessary flexibility and elasticity. The objective of current study was not only to obtain answers to all the doctrinal problems, however, to present a series of facts, arguments, and ideas that expand the capacity of analysis and discussion of this subject. This may enable better decision-making by the levels responsible for the doctrine and the execution of logistics, particularly at the strategic and operational levels. The development of this work began by characterizing the evolution of modern conflicts, resulting from technological, economic, political, psychosocial, and scientific transformations that modern society is going through, both in Pakistan and the world.

## Methodology

The current study employed both descriptive and causal analyses. Frequency, percentages, mean score, and regression analysis were also utilized. The 5-point Likert scale (1= *Strongly Disagree* and 5 = *Strongly Agree*) was used for items in the construct. Information was collected at individual level. The respondents were located in Karachi and survey questionnaires were distributed to 324 target respondents from food industries. A total of 264 complete questionnaires were utilized successfully. This study sought to test the following hypotheses:

H1: The loss of security and control has no significant impact on supply chain performance in food industries of Karachi

H2: The warehousing challenges of industry has no significant impact on supply chain performance in food industries of Karachi

H3: The outsourcing inefficiency has no significant impact on supply chain performance in food industries of Karachi

H4: The accountability has no significant impact on supply chain performance in food industries of Karachi

H%: The track and trace gaps have no significant impact on supply chain performance in food industries of Karachi

## Data Analysis and Results

Table 1 describes the demographic details of the respondents. The data from 264 managers from food industry was obtained. Approximately, 54.5% of the population comprised middle level managers from food industry of Karachi including Bake Parlor, Shan, Kolson, and Dawn Bread. The population consisted of male participants only. The majority 63.6% of the study participants had Master's degree and were married. Moreover, the highest percentage of 33.3% population had 1-3years of experience in the food industry.

**Table 1**

*Descriptive Statistics of Respondents*

	Frequency	Percent
Gender		
Male	264	100

	Frequency	Percent
Female	0	0
Education		
Matric	0	0
Intermediate	0	0
Bachelor	96	36.4
Masters	168	63.6
MPhil	0	0
PhD	0	0
Marital Status		
Married	160	60.6
Unmarried	104	39.4
Position		
Top Level Management	48	18.2
Middle Management	144	54.5
Lower-Level Management	72	27.3
Experience		
Less than a year	8	3.0
1-3 Years	88	33.3
3-6Years	48	18.2
4-6 Years	24	9.1
7-9 Years	56	21.2
10-12 Years	40	15.2
Total	264	100

Table 2 represents the internal consistency for the items in each construct of the questionnaire. The constructs include loss of control and security, warehousing challenges, outsourcing inefficiency, track and trace gaps, accountability, and supply chain performance.

**Table 2**

*Reliability Statistics*

	Pilot Test	Final Test	No. of	Deleted
	$\alpha$	$\alpha$	Items	Items
Loss of Control and Security	.709	.709	3	-
Warehousing Challenges	.887	.887	5	-



	Pilot Test	Final Test	No. of	Deleted
	$\alpha$	$\alpha$	Items	Items
Outsourcing	.224	.661	6	3
Inefficiency				
Track and Trace	.80	.8-		
Gaps				
Accountability	.880	.880		
Supply Chain	.934	.934		
Performance				

The value for alpha must be more than 0.50 for the reliability of the toll. Table 3 indicates that the value of KMO of the independent variables is 0.736 which shows 73% of variance.

**Table 3**

*KMO and Bartlett's Test*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			.736
Bartlett's Test of Sphericity	Approx. Chi-Square		2896.751
	df		300
	Sig.		.000

**Table 4**

*Rotated Component Matrix*

		Component					
		1	2	3	4	5	6
1	Loss of Control and Security	.941					
2		.931					
3		.895					
4		.881					
5	Ware Housing Challenges		.896				
6			.884				
7			.856				
8			.781				
9	Outsourcing Inefficiency			.903			
10				.876			
11				.824			
12	Track and Trace Gaps				.858		

		Component					
		1	2	3	4	5	6
13					.798		
14					.706		
15						.835	
16	Accountability					.830	
17						.622	
18							.811
19	Supply Chain						.770
10	performance						.543

**Note.** Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.

Table 4 indicates construct validity for the instrument. The component matrix was obtained by rotated component matrix in SPSS software. Principal Component Analysis (PCA) for the instrument indicates six extracted constructs which are valid for hypothesis testing.

**Table 5**

*Descriptive Statistics for Respondents*

	N	Min	Max	M	SD	Skewness		Kurtosis	
						Statistic	SE	Statistic	SE
Loss of security ad control	200	3.00	19.00	7.8500	5.2128	1.166	.172	-.326	.342
Warehousing Challenges	200	4.00	19.00	8.8500	4.5795	.633	.172	-1.004	.342
Outsourcing Inefficiency	200	3.00	15.00	4.2300	2.7668	2.722	.172	6.623	.342
Track and Trace Gaps	200	3.00	15.00	4.3900	3.1348	2.401	.172	4.731	.342
Accountability	199	3.00	15.00	5.3417	3.0374	1.298	.172	.811	.343
Supply Chain Performance	200	3.00	14.00	9.1050	2.8131	-.030	.172	-.427	.342
Valid N (listwise)	199								

Table 5 represents average scores for the construct of instruments. The mean value of the construct “loss of control and security” is 7.8500 with

5.21281. The mean score of the warehousing challenges is 8.8500 with 4.57956. The mean for construct “outsourcing inefficiency” is 4.2300 with 2.76684. For construct “track and trace gaps”, the mean score is 4.3900 with 2.401 of standard deviations. The construct “accountability” has a mean score of 5.3417 with 3.03745 of standard deviations. The mean score for “supply chain performance” is 9.1050 with 2.81310 of standard deviations.

**Table 6**

*Model Summary Regression Analysis*

<i>R</i>	<i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	<i>SE</i>
.707	.599	.586	3.70588

**Note.** Predictors: (Constant), Hiring In, At, PBC, SN, FDC

Regression analysis was obtained to test the hypothetical statements made by the researcher using SPSS package. Table 6 indicates the effect of independent variables on the dependent variables. The R-value obtained in the regression analysis indicates multiple correlation coefficients (.707). This depicts that the change in dependent variable (supply chain performance) is caused by the change in independent variables, loss of security and control, warehousing challenges, outsourcing inefficiency, accountability, and track and trace gaps. Moreover, the value for  $R^2$  represents coefficient of determination ( $.599 = 59.3\%$ ), which is the variance proportion brought by the independent variable in dependent variable.

**Table 7**

*ANOVA*

Model	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	Sig.
Regression	2627.859	5	525.572		
Residual	2636.848	192	13.734	38.269	.000
Total	5264.707	197			

Table 7 shows the fitness of the model to regression. The *F* ratio (5,192) = 38.269,  $p < .0005$  shows that the model is good fit. The independent variables (loss of security and control, warehousing challenges, outsourcing inefficiency, accountability, and track and trace behaviors) significantly predict the dependent variable (supply chain performance).

**Table 8***Coefficients*

Model	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	<i>p</i>
	<i>B</i>	<i>SE</i>	$\beta$		
(Constant)	-1.527	1.622		-.941	.348
LCC	-.031	.052	-.031	-.601	.549
WC	.132	.058	.117	2.272	.024
AC	.204	.074	.144	2.773	.006
TTG	-.027	.094	-.015	-.288	.774
OI	.759	.059	.666	12.803	.000

**Table 9***Summary of the Hypotheses*

No.	Hypotheses	Sig Value	Status
H <sup>1</sup>	The loss of security ad control has no significant impact on supply chain performance in food industries of Karachi	.549	Failed to Reject
H <sup>2</sup>	The warehousing challenges of industry has no significant impact on supply chain performance in food industries of Karachi	.024	Rejected
H <sup>3</sup>	The outsourcing inefficiency has no significant impact on supply chain performance in food industries of Karachi	.000	Rejected
H <sup>4</sup>	The accountability has no significant impact on supply chain performance in food industries of Karachi	.006	Rejected
H <sup>5</sup>	The track and trace gaps have no significant impact on supply chain performance in food industries of Karachi	.774	Failed to Reject

Table 9 displays that the study failed to reject the first and the last null hypothesis. Significant relationships were obtained between the independent variables' warehousing challenges, outsourcing inefficiency and accountability, and dependent variable supply chain performance. However, no relationship was obtained for loss of security, control and

track, and trace gaps on supply chain performance in food industries of Karachi.

### **Discussion and Conclusion**

The emergence of Supply Chain Management (SCM) has expanded the possibilities of integration within supply chains by bringing structured processes to manage relationships, in addition to the use of practices and initiatives that enhanced the benefits of this coordination. One of these initiatives is logistics outsourcing. Several researches have focused on the activities necessary to successfully conduct an outsourcing effort. However, there is a gap in literature on studies that deal specifically with the moment that partnership is being put into practice and the challenges faced during the implementation of logistics outsourcing. In order to contribute to the current knowledge of logistics outsourcing, this study addressed the challenges involved in logistics outsourcing. Furthermore, it also investigated the extent to which these challenges effect supply chain performance. The results revealed that the challenges of warehousing, outsourcing inefficiency, and accountability significantly affect supply chain performance of food industries in Karachi. However, loss of control and security and track and trace gaps do not have a significant effect on supply chain performance. This indicates that industries should specifically focus on the challenges of warehousing, efficiency of outsourcing, and accountability in logistics outsourcing. On the basis of current results, it can be concluded that logistics outsourcing plays an effective role for firm performance. However, companies should not presume that logistics outsourcing activities would lead towards competitive advantage. Logistics outsourcing requires internally strong logistics capability and competencies to overcome the challenges and achieve organizational benefits.

As Wanjiru ([2013](#)) suggested that most of the companies demand logistics outsourcing because of the structural changes that lead companies towards reduced budgets, downsizing and reduced staff. The decision of transferring business functions to external entities plays a crucial role in the strategic alignment of firms. The core elements of his research were not only to explain the motivating factors in logistic outsourcing but it also determined the potential challenges that occur during the process of logistic outsourcing. The research was limited to manufacturing companies of Kenya utilizing a sample survey research design of the importers. The population was comprised of 455 companies from the manufacturing

industry in Nairobi. A self-administered questionnaire with both open ended and closed questions was utilized to collect primary data. The researcher utilized descriptive statistics to analyze the data. Results revealed that the reasons behind outsourcings are the key for the effectiveness of outsourcing activities. Moreover, the extent to which challenges are faced by the firms also determine the decisions to outsource in the firms. The study recommended that the manufacturing firms in Nairobi should be focused more on business functions that ensure the reduction of overhead costs. Advantages of external experience and expertise should be considered in order to facilitate internal capabilities and expertise of the firms. Organizations can reduce the total overall costs if decisions are made considering all the challenges and where third-party logistics providers provide effective services. Emphasize must be given on improved customer focus and measures must be taken by the firms to compete effectively in the market.

In another research, Aziz et al. ([2020](#)) studies the logistics outsourcing and logistics capability on the firm performance in manufacturing companies of Pakistan. The effects of logistics capability on firm's performance were examined and it was studied how outsourcing is essential and how can a firm receive benefits from outsourcing activities rather to establish their own logistics capability. The study utilized a survey designed based upon a structured questionnaire. Primary data was collected for analysis. The population included logistics experts from manufacturing companies in Karachi, Pakistan. With head offices based on Karachi, that have their own logistics or outsource their logistics. The questionnaire was distributed among 500 respondents in head offices of 113 manufacturing companies located in Karachi. The statistical technique of confirmatory factor analysis was utilized to check internal consistency of the tool. Moreover, SEM (Structural Equation Model) was done to identify the effect of logistics capability on firm's performance. The research examined the role of logistics outsourcing as a mediator. The results of the research indicate that logistics capability has positive effect on the firm performance.

It is essential that logistics also undergo profound transformations in order to adapt to the changes of modern conflicts. Otherwise, it will decisively compromise the success of the operations. Outsourcing is a reality in the modern world, not just among civilian companies, but even in many important for the companies which are constantly involved in

situations of crisis or conflict. In Pakistan, it appears that there is already a wide and diversified industrial and service base in our country, which can meet the logistical needs of operations. However, the use of outsourced companies to provide logistical support in operations must consider a series of operational, doctrinal, legal, technical and financial factors, among others, in order to become a tool that multiplies the combat power troops, increasing the flexibility and elasticity of logistics. Thus, the present work aimed to study the doctrinal changes necessary to the Logistic Functions, in order to enable the employment of companies, that is, to outsource logistics services in support of operations (Jiang & Qureshi, [2006](#)).

### **Conflict of Interest**

The authors of the manuscript have no financial or non-financial conflict of interest in the subject matter or materials discussed in this manuscript.

### **Data Availability Statement**

The data associated with this study will be provided by the corresponding author upon request.

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