

Supply Chain Integration and Performance of Humanitarian Organizations in Nairobi City County, Kenya

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Resolution: This study explored the relationship between supply chain integration and performance of humanitarian organizations in Nairobi City County, Kenya. The reading was steered by the subsequent specific objectives: information integration, internal integration supplier integration, customer integration on performance of humanitarian organizations in Nairobi City County, Kenya. The reading was attached on theories pertinent to specific objectives. The reading espoused descriptive research design.

Keywords: Information integration, internal integration supplier integration, customer integration and performance of humanitarian organizations

1.1 Introduction:

Worldwide supply chains find themselves understaffed for present times necessitating attention shift from cost wounding to more connectivity and dexterity (Agrawal & Narain, 2018). Supply chain integration (SCI) has convert an area of interest among scholars and practitioners in recent decades. SCI emphasizes connectivity and simplification through coordination, collaboration, cooperation, interaction, and elimination of duplicate elements in business processes. There is increasing literature indicating that SCI has a positive effect on performance, including cost, quality, flexibility, and delivery outcomes. Increased frequency and complexity of disasters in the last decade has shown better partnership collaboration is a pre-requisite of engagement in supply chain operations (Cozzolino, 2021). Traditionally supply chains have lacked mapping and visibility creating inconsistency (Sodhi, Tang & Willenson, 2021). In this assessment the procedures in a supply chain are separated into a sequence of cycles, each performed at the interface amongst two succeeding stages of a supply chain. This means that each cycle is decoupled from other cycles via an inventory so it can function independently, optimize its own processes and is not hindered by 'problems' in other cycles. Organizations in efforts geared towards creating alliances engage in collaboration with their supply chain partners to coordinate activities within their supply chains (Baharmand, Comes & Lauras, 2017).

1.1.1 Resource Based View Theory

The theory was introduced by Barney in 1991 and advances that a firm's resource base is the precursor to competitive advantage (Barney, 1991). RBV theory suggests that companies have heterogeneous resources, and that these resources are imperfectly mobile over time. When certain characteristics of company resources are met, sustainable competitive advantage is achieved: important, rare, non-substitutability and inimitability. There can't be any strategically comparable useful commodities that aren't rare or imitated. The firm resources are often categorized into physical capital resources, human capital resources and organizational capital resources. According to Lester (2005), these resources include assets, capabilities, organizational processes, attributes, and knowledge that a company owns and controls enabling the formulation of strategy to boost its efficiency and effectiveness.

1.1.2 Relational View Theory

According to Cachon and Netessine (2006), proposed the Relational View theory, which argues that idiosyncratic inter-organizational linkages can lead to long-term competitive advantage. The relationship between two or more supply chain partners can be determined using relational view theory. These can take the form of relationship-specific investments in assets, significant sharing of knowledge, complementary resources/capabilities and effective governance. The greater the investment made by alliance partners in relation-specific assets, inter-firm knowledge-sharing routines, complementary tools or skills, and effective governance, the higher the potential for superior performance. Competitiveness emanates from inter-firm sourced of advantages as opposed to from within-firm resources (Conner & Prahalad, 1996).

1.1.3 Information Processing Theory

This theory was developed by Dicksen (1996), and identifies three important concepts: information processing needs, information processing capability, and the fit between the two to obtain optimal performance. He stated that the capability of the organization

in coordination of successful operations depended upon its ability to efficiently and effectively process required information. The aim of the theory is to develop an optimum position between these two ways, best fit between information need and organizational ability. Organizations need quality information to cope with environmental uncertainty and improve their decision making. Typically, organizations have strategies to cope with uncertainty and increased information needs including developing buffers to reduce the effect of uncertainty and implementing structural mechanisms and information processing capability to enhance the information flow and thereby reduce uncertainty. Application in supply chain include building inventory buffers to reduce the effect of uncertainty in demand or supply and adding extra safety buffers in product design due to uncertainty in product working conditions.

1.1.4 Game Theory

Game theory, originally developed by Leng and Parlar (2005), argues that several economic decisions involving over one actor such as a buyer and a vendor take the shape of a sequential, strategic game involving anticipation by one player of the opposite player's actions. Game theory illustrates a mathematical background to model the system and create solutions in competitive or conflicting scenarios. Supply chains cover different enterprises with common information and logistic networks. Enterprises are players during a game with a standard goal, but separate constraints and conflicting objectives. In Game theory each player acts to optimally accomplish their individual goal, considering that the others play within the same manner. If the individual goal of every player is solely to maximize his gain or to attenuate loss, the agreements obtained via negotiation would be fragile and not offer optimality for the entire supply chain, especially particularly when external demand is not definite (Hennet & Adra, 2008). Games such as the Prisoner's Dilemma have been used to illustrate how cooperative behavior becomes more likely if two actors interact regularly with each other as repeated interactions enable them to get to know each other, create confidence and resolve the lack of information available during a one-off interaction about the likely behavior of the opposite party.

2.1 Information Integration

Information integration was be considered as a variable that affects the performance of humanitarian organizations. The attributes of information to be taken into consideration for the study will be: information exchange, information quality and information content. Information integration has remained originate to be essential for customer and supplier integration (Turkulainen, Roh, Whipple & Swink, 2017). Information integration is not exclusively forced to the competence and request of technology. It necessitates the inputs and protagonist playing of individuals, technological arrangements to initiate, sort, procedure, and scatter information to the elected location at the right time for capable decision-making procedure. When information is swapped transversely the supply chain, real time data can be composed as earlier communications are then comprehended with other associates inside the supply chain which would consequence in better-quality customer service and better demand predicting (Ominde *et al.*, 2022). The exchange of information should be the starting point for firm integration, as it is one of the most critical factors in improving SC (Wagner & Thakur-Weigold, 2018).

2.2 Internal Integration

Internal integration will be used as a supply chain integration variable that influences the performance of humanitarian organizations. The attributes of internal integration to be considered will be; system wide integration, cross functional teams and resource sharing (Nyile *et al.*, 2021). Internal integration is the synchronized and strategic arrangement of business procedures and functions inside an organization that is organized to safeguard that firm accomplishes thoroughgoing performance. Internal integration involves collaboration of function within an organization for problem solving and achieving mutual outcomes. Collaboration is identified by people's acceptance to work jointly, sharing knowledge and information, making decisions and solving problems. Collaboration is a key aspect on integration and should occurs across strategic, tactical and operational levels of the organization (Shafiq & Soratana, 2019). Internal integration is an initial step towards achieving supply chain integration as the association amongst the two consequences in the perception of SCI. Internal integration indorses the exchange of resources, information and materials amongst functional areas inside the supply chain. According to Seifert, Kunz and Gold (2018), supply chain integration initializes with internal integration among the different departments and functions inside an organization previous to the enactment of external integration.

2.3 Supplier Integration

Supplier integration shall be used as a supply chain integration variable that influences the performance of humanitarian organizations. The attributes of supplier integration to be considered shall be; strategic alliances, vendor managed inventory and long-term supplier contracts (Mideva & Moronge, 2019). Supplier integration involves suppliers' involvement in the significant decision-making procedures of the organization with information concerning demand predictions, production and inventory levels existence communal amongst them. Supplier integration should focus on improved customer service. Supplier integration involves interchange of information, materials and knowledge. Its main purpose is to exceed a single organization's limits to easily coordinate processes. . Supplier relationship development, cross functional involvement and joint problem solving has been made possible through coordination. These mechanisms enable capability development and leads to creation of organizational resources which provide the organization with competitive advantage according to the RBV theory (Cheruiyot, 2018). By collaborative integration between supply chain partners by better coordination of rewards and reward programs to mitigate wasteful use of resources and non-value-adding activities, business costs can be significantly reduced. Supplier integration and collaboration is conceptualized from the use of practices such as vendor managed inventory. This is a supply chain collaboration practice where the vendor manages inventory at the retailer or manufacturer and decides on how much and when to replenish inventory (Nyile *et al.*, 2021).

2.4 Customer Integration

Customer integration shall be used as a supply chain integration variable that influences performance of humanitarian organizations. The attributes of customer integration to be considered shall be; customer collaboration and involvement in decision making, customer feedback coordination follow up and customer complaint management (Makepeace, Tatham & Wu, 2019). The integration of customers inside the supply chain delivers the firm with the advantage of having an impression of the customers' necessities and their specific requirements giving them the benefit of serving them healthier. Integrating customers in a supply chain is placed on drawing information from customers such as their purchasing patterns, their favorite for products and their aptitude to purchase products which would then be rummage-sale in making healthier decisions throughout the manufacturing procedure or auctions to customers. Customer integration has optimistic relation with monetary performance (Nyile *et al.*, 2021). Customer and supplier integration extends internal integration by establishing a cross-functional team integrating external organizations. Customer integration enables firms to engage in their customers' activities with frequent contact to certify high product quality, low price and operational effectiveness (Makepeace *et al.*, 2019).

2.5 Performance of Humanitarian Organizations

Performance measurement enhances the decision-making in supply chains; at the same time, it is challenging to design a system that involves several supply-chain partners who might have conflicting goals. Measuring and managing performance is crucial for an efficient and effective humanitarian supply chain. There are units of measure such as sophisticated quality, stock-out taxes, and better-quality response lead time. In amplification supply chain performance, arranged on the direct welfares of supply chains being slow such as faster response times, on-time order distributions, abridged logistics costs but also underlined other indirect welfares that can demonstrate problematic to compute such as customer satisfaction and retention taxes. According to (Makepeace *et al.*, 2019), performance actions should focus on the general performance of the supply chain seeing variables of monetary, customer service, suppleness, competence indicators. Humanitarian organizations performance is accustomed to facing challenges in obtaining precise data, limited information technology, a muddled environment, minor motivation, hypothetically negative media exposure, human resource subjects, general unwillingness, the conflict amongst long term and short-term goalmouths and a lack of internal acknowledgement of the supply chain Nyile *et al.* (2021), recognized the tests of humanitarian supply chains as postponement in distribution, doubt in demand, poor quality and magnitude of goods and services brought during disaster situations and effects and practices to be adopted to overcome them. Humanitarian performance evaluation by donors is increasingly demanding accountability, transparency and value for money in return for their sponsorship of relief aid agencies and as they have great interest in knowing how successful an organization is in accomplishing its goals with the resources they have provided.

3.1 Research Design

According to Creswell (2013), research design is a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings. This study shall use a descriptive research design. Research designs are inquiries entailing the qualitative and quantitative methods of approach aimed at providing direction for procedures in research design. Constitutes of research design for a research study include decisions regarding what, where, how much and by what means (Kothari *et al.*, 2011). The research was conducted using a descriptive research method. Creswell (2013) infer that descriptive research enables researchers summarize and organize data in an effective and meaningful way. Descriptive research shall be appropriate for this study as it was to produce data that is holistic, contextual and rich that was provide answers to the present status of the study.

3.1.1 Correlation Analysis

This research adopted Pearson correlation analysis determine how the dependent variable such as performance of humanitarian organizations in Nairobi City County, Kenya narrates with the independent variables such as information integration, internal integration, supplier integration, customer integration. The outcomes show that internal integration has optimistic and noteworthy inspiration on performance of humanitarian organizations in Nairobi City County, Kenya ($r=0.750$, $p\text{ value}=0.002$). The p -value (0.002) was fewer than the noteworthy level 0.05 henceforth making the connotation significant. The consequence is in line agreement with the discoveries of Nyile *et al.* (2021) that internal integration has optimistic and noteworthy inspiration on performance. The consequences further exposed that supplier integration has optimistic and noteworthy inspiration on performance of humanitarian organizations in Nairobi City County, Kenya ($r=0.806$, $p\text{ value}=0.004$). The p -value (0.004) was fewer than the noteworthy level 0.05 henceforth making the connotation significant. The conclusions are in line with the answers of Ominde *et al.* (2022) who exposed that supplier integration has optimistic and significant effect on performance. Furthermore, the outcome exposed that customer integration has optimistic and significant connotation with the performance of humanitarian organizations in Nairobi City County, Kenya ($r=0.811$, $p\text{ value}=0.003$). The p -value (0.003) was fewer than the noteworthy level 0.05 henceforth making the connotation significant. The conclusions concur with the answers of Owino (2015) who institute that customer integration has optimistic and noteworthy effect on performance. Table 4. 9: Correlations Coefficients

		Organization Performance	Information Integration	Internal Integration	Supplier Integration	Customer Integration
Performance of human.org	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	296				

Information Integration	Pearson Correlation	.821	1			
	Sig. (2-tailed)	.002				
	N	296	296			
Internal Integration	Pearson Correlation	.750	.097	1		
	Sig. (2-tailed)	.002	.187			
	N	296	296	296		
Supplier Integration	Pearson Correlation	.806	.274	108	1	
	Sig. (2-tailed)	.004	.071	.171		
	N	296	296	296	296	
Customer Integration	Pearson Correlation	.811	.167	.274	108	1
	Sig. (2-tailed)	.003	.087	.071	.171	
	N	296	296	296	296	296

The research used R-squared to show the variation in dependent variable (performance of humanitarian organizations in Nairobi City County, Kenya) that could be explained by (information integration, internal integration, supplier integration, customer integration). The R squared was 0.876 and this implied that 87.6% of the independent variables i.e. information integration, internal integration, supplier integration and customer integration and its upshot on dependent variable (performance of humanitarian organizations in Nairobi City County, Kenya)

Table 4.10: Model of Goodness fit

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.936 ^a	0.876	0.877	0.16355

The investigation used analysis of alteration to regulate if the perfect was good fit for the data. As portrayed in table 4.10, where R² is 0.876 suggesting 87.6% was the inspiration of the four independent variables of this study. The remaining alteration of 12.4% are other factors which can have effect on the dependent variable of this research but not inclusive in this answers.

Conclusion

Findings revealed that information Quality, information Exchange and information Content influences performance of humanitarian organizations in Nairobi City County, Kenya. The conclusion allows you to have the final say on the issues you have raised in your paper, to synthesize your thoughts, to demonstrate the importance of your ideas, and to propel your reader to a new view of the subject.

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