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## **Logistics Outsourcing Services and Performance of Firms in the Tele-Communications Sector: A Case of Airtel Rwanda Ltd**

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# Logistics Outsourcing Services and Performance of Firms in the Tele-Communications Sector: A Case of Airtel Rwanda Ltd

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## Abstract

This study assessed the effect of out-sourcing services on performance of firms in telecommunication sector with reference to Airtel Rwanda Ltd. The specific objectives were to determine effect of financial systems, network monitoring tools services, and supplier network responsiveness outsourcing on organizational performance of Airtel Rwanda Plc the study provides useful data to management of Airtel to assist it in service delivery and quality performance for the outsourced services. The study targeted 65 senior managers and key employees at Airtel Rwanda Ltd and sampled 56 respondents using Yamane formula. Primary and secondary data collection techniques were both using through questionnaire and interview guide. Data was analyzed using Pearson's correlation analysis to establish the relationship between variables. Results to the first objective show that the logistic process response to unexpected demand changes and the effectiveness in delivery of shipments both scored means of 4.597. These variables scored means of 4.376, 4.376 and 4.038 respectively. There was the significant correlation between rapidly adjusts warehouse capacity to address demand changes and project time ( $r=.206$ ;  $p\text{-value}=.000$ ). Results to the second objective that all respondents agreed that their company uses outsourcing in its operations and as a result, they indicated that the supply chain operating system responds rapidly to changes in product volume demanded by customers (mean 4.921). The grand mean of these factors was 4.498 showing that generally there was higher responsiveness of the supply chain systems to customer needs. For the effect on responds rapidly to changes in product mix demanded by customers on quality, time cost, the study ascertained that responds rapidly to changes in product mix demanded by customers is statistically significant with quality ( $r=0.122^*$ ;  $p\text{ value}=0.035$ ). Results on effectively expedites emergency customer orders felt that it is significantly correlated with an increase of quality of services ( $r=0.123^*$ ;  $p\text{ value}=0.034$ ). Results to the third objective shows that the grand mean was 4.155. It was indicated that major suppliers consistently accommodated requests (mean of 4.712) and the major suppliers changed

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product volume in a relatively short time (Mean of 4.259). Results show that major suppliers consistently accommodate our requests was insignificant with the quality of services ( $r=0.080$ ,  $p$ -value= $.0169$ ), and major suppliers consistently accommodate our requests was insignificantly correlated with efficient and effective use of cost ( $r=0.013$ ,  $p$ -value= $.822$ ). Finally, the study found a significant correlation between Major suppliers consistently accommodate our requests and timely delivered of services to beneficiaries ( $r=0.105$ ,  $p$ -value= $0.071$ ). All the correlations were statistically significant given that the  $p$  value was  $< 0.05$  proposing that an increase in major suppliers consistently accommodate our requests was insignificant with the quality of services increase quality of services, timely delivered, efficient and effective use of cost allocated and vice versa. In conclusion, the study concludes that Airtel Rwanda Plc in Rwanda have outsourced financial system billing. Airtel Plc had outsourced networking monitoring tools which play a pertinent role to the organizational success. Airtel has masts/towers and fleet management that contribute to organizational performance. Finally, the study recommends that to adopt masts/towers and fleet management in means, the government should revise competition policy, and contract duration for outsourcing activities. Future studies should consider conducting similar research in different types of companies for comparison of results with the aim of coming into consensus on the generalization of the results.

**Keywords:** *Outsourcing, in-housing development, telecommunication, core business activities.*

## 1.0 Introduction

Outsourcing practices were studied by previous scholars worldwide as well as in Rwanda. Therefore, outsourcing contribute more to organizational success. Outsourcing researches outside of Rwanda demonstrated inconclusive findings either significant or insignificant association between outsourced functions and success for several companies (Murua, 2013). Previous researches on subcontracting were based on theories. Concluding remarks give discrepancies positions. In this regard, Brookes and Haines, (2015) demonstrate the contribution of outsourcing services in reducing expenses, improving skills, innovativeness, and decrease follow up of the firm Kimura (2012) believe that outsourcing supports to save up to more than 40% of operation costs, 54% of time allocated to recruitment, 42% of reduction in overheads costs, and access to new technologies. According to Rwanda Utilities and Regulatory Agency(2020), 367 persons were employed by Airtel Rwanda Plc at the end of December 2020; 135 persons are permanent staff while two 232 workers are outsourced which makes 63% of Airtel Rwanda Plc business outsourced, but, Airtel Rwanda Plc is yet to fully benefit from it (RURA 2020). The present researcher assessed effect of outsourcing services on organizational performance of Airtel Rwanda Plc in term of the effect of financial systems (billing) outsourcing, network monitoring tools services outsourcing, and supplier network responsiveness on organizational performance of Airtel Rwanda Plc.

### 1.1 Research Objectives

- i. To determine effect of financial systems (billing) outsourcing on organizational performance of Airtel Rwanda Plc.
- ii. To analyze effect of network monitoring tools services outsourcing on organizational performance of Airtel Rwanda Plc.
- iii. To assess effect of supplier network responsiveness on organizational performance of Airtel Rwanda Plc.

## 2.0 Literature review

### 2.1 Review of Empirical Studies

Earlier studies by Gilley et al. (2014) indicate that training and development of human capital and outsourcing leads to better business performance. Unfortunately, previous studies did not discover influence on organizational success, a clear influence on organizational innovativeness success and stakeholder success. Jiang et al., (2016) ascertains the effect of outsourcing on organization success relied on a representative group of 51 organizations. Dissimilar to past researches on outsourcing impacts, they employed reports information to assess the success and testing for adjustment in functioning success as an outcome from outsourcing. Khaki and Rashidi (2012), did research on outsourcing practices in 40 banks in Kenya. They distributed questionnaire interview on the 40 banks operating in Kenya. They demonstrated that the highest in Kenya banks using ATM, client in process was the low operation in terms of numbers. According to Brednelow (2012), a structured interview guide to explore influence of subcontracting functions on success of telecommunication corporate in UK. Results felt show a positive association between procuring to supplier on organizational success. Pujals (2013) conducted descriptive research using 20 firms in European Union. Results indicated that banks could subcontract a variety of activities for different reasons and challenges. Some of the reasons and challenges given by Pujals (2013) were cost control, the decrease of risks, accessibility to new technology, and focus on primary functions, quality amelioration and high degree of operations. The study additionally assessed risks were associated with outsourcing for financial services that were service and product control loss, risks in operations, internal knowledge and experience, dynamic losses, issues in cultural and social problems, challenges, quality and competitive advantages, implications from the research are positively associated with outsourcing practices and success of organizations.

A research carried out by Wachida et al. (2013), utilized a purposive sampling technique on the role of effect of outsourcing on income in Nairobi. This research discovered that outsource may produce highly insignificant results relying on challenges met in business conditions and the ability of willingness to do transaction. Kamanga and Ismail (2014) in a revision of previous studies on impact of outsourcing on success of Delmonte Kenya. Results showed that cost, quality, process transition, value addition and technology adoption have a positive correlation with the organizational success. Research comprises that there is unclear correlation between challenges and success. Mohamud and Iravo (2015) undertook research on impact of sourcing on non-key activities to the success of organizations. Results that provider's choice, staff skills, correlation with leaders, people, contract management and assets were key pertinent elements in outsourcing of related activities that affect institutional success in PPOA. The study felt that very

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research relied on outsourcing in telecommunication firms. In accordance with observations, concluding remarks, and recommendations from a research done by Musubika (2010). It was evidenced that firm subcontract with other to obtain experiences, fast, reduced expenses. These researches suggests that firms would procure their duties in order to decrease expenses and focuses on core responsibilities.

A research conducted by Shih, & Chiang, (2011), investigated the effect of subcontracting on firm success among house that published books in Kenya relied on the way in which competition, customer needs for custom-made for firms to assess, increase operational success. The researcher target 30 companies in the Kenyan publication sector. A questionnaire survey was adopted to obtain information from respondents. Results demonstrated that a significant number of those companies have outsource photocopy and print out services, dissemination and transportation of books, marketing and technological services. The study revealed that when a company outsources core or associated duties, it contributes more in increasing the level of production, net profit, income and high quality of production. The scholar proposed that corporates must outsource further functions that they did not bear economical position in comparison with its rivals in order to increase the level of success. Furthermore, a research carried out by Akewushola (2022), on the role of strategic outsourced services on the firm success in Nigerian manufacturing industry had a research problem consists in knowing if and how global competitiveness and industries contributed to the acceleration and improvement of corporate to produce much money via effective utilization of restricted assets. The research decided to use a proportional sampling strategy to draw 12 respondents. The researcher distributed research instrument to obtained information from sampled population. The results evidenced that companies have procured their core duties in order to reduce operational costs, increasing level of purchase, customer base and net profit and annual income.

## 2.2 Theoretical Framework

In conducting this paper, the researcher used Transaction Costs Theory, which provides a motive for outsourcing (Poppo and Zenger 1998). However, other costs related to the exchange of services within or across firm boundaries, such as search, selection, bargaining, monitoring and enforcement (Madhok 2002), may offset the production cost savings of external suppliers given the higher likelihood of opportunistic behavior of an external supplier compared to an internal unit (Wasiamsom 1991). Network operation services have significant economies of scale. As mentioned above, external suppliers build Global Network Operations Centers to serve the networks of many customers.

Environmental and Behavioral Uncertainty Theory which is constantly “shifting and evolving” in the telecommunications industry (Crandall et al.2009). Despite this, mobile network operators cannot adapt their physical network quickly to demand fluctuations. From this theory, specialized external suppliers of network operation services can realize economies of scale and other cost benefits and can offer services at lower prices than internal suppliers at network operators. We further find that transaction costs from market-based transactions do not exceed the cost advantages of external purchasing. Expert view avers that firms create sustained competitive advantage with resources that are rare, valuable, imperfectly imitable and not substitutable (Barney

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1991). This argument is not based on the cost advantages of outsourcing however, but rather on the lack of benefits from internal governance.

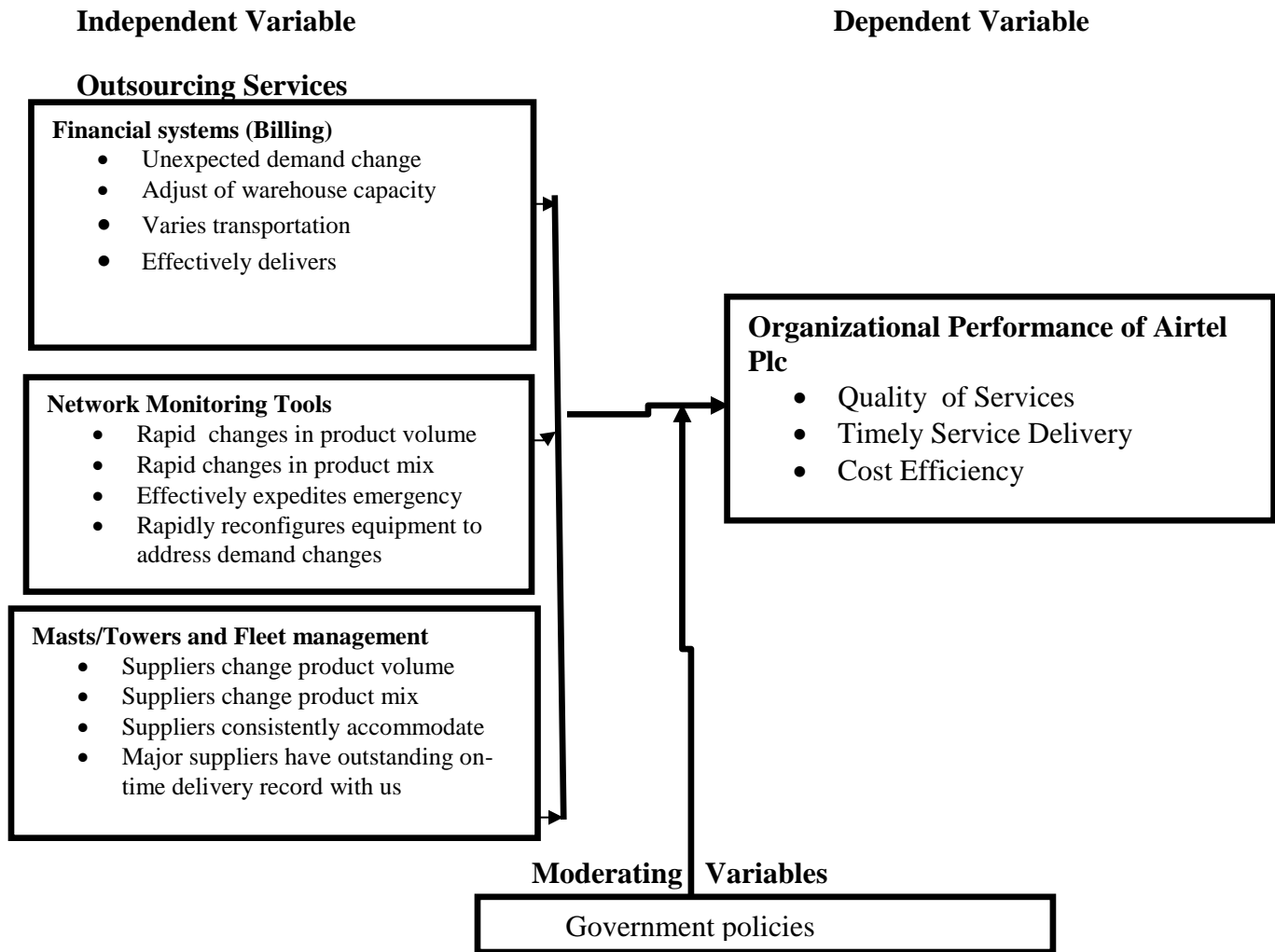
The Agency Theory has a long tradition in analysing situations when parties cooperate through the division of labour (Eisenhardt 1989). If the performance of an agent, however, is difficult to measure, market contracts might be less efficient than internalizing the principal-agent relationship (Barzel 1989, p. 76). In market transactions, such instruments are not available. We now question if the performance of external network operation services can be measured accurately. If all functions related to operation services are outsourced, the focal variable is the overall quality and reliability of the network, which is crucial for the success of an operator. In practice, network operators include key performance indicators, audits and service benchmarks in their contracts with external suppliers and measure network quality via overall network coverage and the number of breakdowns (Friedrich et al. 2009, p.14). Considering that production experience accumulates with the absolute number of produced or served entities, external providers gather more experience in running a mobile network infrastructure than network operators. Agency theory also analyses the overall quality and performance (the “effort”) of an agent’s work. Difficulties in measuring the agent’s performance decrease the quality of the agent’s work, while the governance mode has no bearing on this effect (Alchian & Demsetz 1972). In contrast, if quality and performance of delegated work can be accurately measured, markets deliver high-powered incentives through prices (Poppo & Zenger 1998). Managers try to imitate this mechanism within a company by linking wages to some measurable part of an employee’s performance. However, this leads to internal politics and rent-seeking, which in turn lowers performance and decouples pay from (relevant) performance measures (Milgrom & Roberts 1988). In short, market governance leads to higher relative quality of performance if output can be measured accurately. We already argued that external network operation service performance could be measured accurately. Following the logic of Agency Theory then, network operators can enhance the quality and performance of network operation services by outsourcing these services.

A third literature stream investigates the relationship between technological dynamism and vertical firm boundaries. Whereas TCE examines uncertainty in a broader sense, these scholars study how technological uncertainty affects the performance of vertically integrated or disintegrated companies. Moreover, the process of renegotiation takes time during which the old contract does not reflect changed environmental conditions. That is why hierarchical governance is favorable in uncertain technological environments. A conflicting view states that investments are related to a specific technology generation. If a new technology replaces the old one, past investment becomes obsolete (Balakrishnan & Wernerfelt 1986). Further, with rapid technological change integrated companies cannot react flexibly by purchasing the new technology externally (Poppo & Zenger 1998). Wasiamson (1991) argues that in the presence of technological uncertainty, the incentives of market contracts to “choose achieved on their homepages.

Performance outcomes result from success or market position achieved (Hooley et al., 2001). Performance can be determined in various ways. Financial performance literally refers to financial measures, such as profit margin and return on investment Market performance includes e.g. measures of market share and sales volume. Additionally, superior performance in this study refers to performance that exceeds that of its closest competitors (cf., Hunt and Morgan, 2001). Specially, superior market performance probably, but not necessarily, results in superior financial

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performance (Hooley et al., 2001). Where the first alternative, product-orientation emphasizes on product only, it is without a doubt, market orientation that stresses the importance of using both customer and competitor information (Hunt and Morgan, 2001) that should clearly be involved when formulating strategy. The above theory enabled the researcher to establish the conceptual framework as follows:



**Figure 1: Conceptual Framework**

**Source: Researcher (2023)**

The present research that outsourcing services (independent variable), organization performance (dependent) variable and facilitating factors as intervening variables. Indicators of outsourcing services that will be measured by the present study were financial systems (Billing), network monitoring tools, masts/towers, fleet management. The financial systems (Billing) outsourcing was conceptualized by the unexpected demand change, adjust of warehouse capacity, varies transportation and effectively delivers. The network monitoring tools outsourcing was conceptualized by the rapid changes in product volume, rapid changes in product mix, effectively expedites emergency, and rapidly reconfigures equipment to address demand changes. The masts/towers, fleet management were

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conceptualized by the suppliers change product volume, suppliers change product mix, suppliers consistently accommodate, and major suppliers have outstanding on-time delivery record with us. The organization performance was a dependent variable and has been conceptualized in term of efficient costs, quality of services and timely delivery of services both dependent and independent variables were moderated using intervening variables in the context of government policies, policies of outsourced service providers and regulatory framework for labor.

### **3.0 Materials and Methods**

Descriptive research design was be used to get the kind of information required and collect feedback reports from the sampled population through description of the study (Outsourcing and Organizational Performance). The population in this study was be 65 key employees that are concerned or directly deal with outsourcing for the company and these are from the departments of procurement, marketing, human resource, finance, fleet management as well as senior management team.

### **4.0 Results and discussion**

Information was presented and discussed based on the focuses on assessment of the necessity of outsourcing to the operations of Airtel Rwanda, how that company manages its daily outsourcing operations and the relationship between its organizational performance and outsourcing of services.

#### **4.1 Effect of Financial systems (Billing) Outsourcing on Organizational Performance of Airtel Rwanda Plc.**

For determining effect of Financial systems (Billing) outsourcing on organizational performance, the researcher started with the determination of financial system billing outsourced by Airtel Rwanda Plc.



**Table 1: Application of financial systems (Billing) Outsourcing at Airtel Rwanda Plc.**

Financial systems (Billing)	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree	Mean	Standard Deviation
	%	%	%	%	%		
Responds rapidly to unexpected demand change	3.0	1.3	11.4	36.9	47.5	2.83	0.98
Rapidly adjusts warehouse capacity to address demand changes	7.2	12.7	4.7	14.0	41.7	3.66	0.81
Rapidly varies transportation carriers to address demand changes	2.1	3.2	20.3	36.9	37.3	3.16	1.16
Rapidly accommodates special or non-routine customer requests	7.2	12.7	4.7	14.0	41.7	4.376	0.433
Effectively delivers expedited shipments	2.1	3.2	20.3	36.9	37.3	4.597	0.399
							4.397

**Source: Primary Data (2023)**

Results show that the logistical process responds rapidly to unexpected demand change and effectively delivers expedited shipments. The logistic process response to unexpected demand changes and the effectiveness in delivery of shipments both scored means of 4.597. However, the logistic process response was weaker in terms of rapid variation in transportation carriers to address demand changes, rapid accommodation of special or non-routine customer requests and rapid adjustment of warehouse capacities to address demand changes. These variables scored means of 4.376, 4.376 and 4.038 respectively. The grand mean of the logistic process responsiveness factors was 4.397. These results reveal that Logistic Process Responsiveness (LPR) was high, given that the supply chains respond rapidly to unexpected changes in demand, warehouses capacity rapidly adjusts to address changes in demand, transportation carriers are rapidly varied to address demand changes, supply chains rapidly accommodate special or non-routine customer requests and deliveries of expedited shipments are effectively done.

**Table 2: Correlation between Outsourcing Services and Organizational Performance of Airtel Plc**

	Responds to unexpected demand change	Rapidly adjusts warehouse capacity	Rapidly varies transportation carriers	Effectively delivers expedited shipments	Quality	Time	Cost
Responds to unexpected demand change	1						
Rapidly adjusts warehouse capacity	.56	1					
Rapidly varies transportation carriers	.045	.435	1				
Effectively delivers expedited shipments	.56	.56	.115*	1			
Quality	.006	.048	.006	.076	1		
Time	.56	.56	.56	.56	.039	1	
Cost	.031	.151**	.076	.190	.003	.050	1
	.591	.009	.190	.56	.953	.035	.701
	.56	.56	.56	.56	.56	.56	.629
	.035	.206**	.060	.068	.050	1	.502
	.542	.000	.305	.241	.385		.56
	.56	.56	.56	.56	.56	.56	.56
	.013	.047	.009	.011	.005	.023	.023
	.825	.417	.874	.850	.926	.692	.692
	.56	.56	.56	.56	.56	.56	.56

**Source: Primary Data (2023)**

Findings provide the correlation between independent and dependent variables. For responds rapidly to unexpected demand change, study show insignificant relationship between Responds rapidly to unexpected demand change project quality ( $r=.003$ ;  $p \text{ value}=0.953$ ); Responds rapidly

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to unexpected demand change and project time was not correlated ( $r=.003$ ;  $p$  value $=.542$ ); Responds rapidly to unexpected demand change insignificantly correlated with project cost ( $.013$ ;  $p$ -value $=.825$ ). Correlation analysis between the Rapidly adjusts warehouse capacity to address demand changes and organizational performance of Airtel Plc show that rapidly adjusts warehouse capacity to address demand changes is insignificantly correlated with project quality ( $r=.022$ ;  $p$ -value $=.701$ ); with project cost ( $r=-.047$ ;  $p$  value $=.417$ ). There were insignificantly correlated with an increase of project quality, project cost given the  $p$  value was  $>0.005$  suggesting that increase in rapidly adjusts warehouse capacity to address demand changes did not lead automatically to project quality, and project cost. Contrary to the significant correlation between rapidly adjusts warehouse capacity to address demand changes and project time ( $r=.206$ ;  $p$ -value $=.000$ ). Results on the correlation between rapidly varies transportation carriers to address demand changes and organizational performance of Airtel Plc felt that Rapidly varies transportation carriers to address demand changes was not significantly correlated with quality of services ( $r=.028$ ;  $p$ -value $=.629$ ). In addition, rapidly varies transportation carriers to address demand changes was not significantly correlated with time ( $r=.060$ ;  $p$  value $=.305$ ). Finally, rapidly varies transportation carriers to address demand changes was not significantly correlated with efficiency and cost efficiency ( $r=.009$ ;  $p$ -value $=.874$ ).

#### 4.2 Analysis of Network Monitoring Tools Services Outsourcing on Organizational Performance of Airtel Rwanda Plc

The second research objectives analysed impact of network monitoring tools services on organizational success for Airtel Rwanda Plc. The researcher assessed how network monitoring tools outsourcing are applied by Airtel Rwanda Plc.

**Table 3: Extent to which network monitoring tools is applied at Airtel Rwanda Plc**

Network Monitoring Tools Services Outsourcing	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree	Mean	Std
	%	%	%	%	%		
Responds rapidly to changes in product volume demanded by customers	0.0	3.0	19.1	28.8	49.2	3.33	.51
Responds rapidly to changes in product mix demanded by customers	1.3	10.6	27.5	19.9	40.7	4.40	.54
Effectively expedites emergency customer orders	1.7	7.6	6.4	37.3	47.0	4.00	1.26
Rapidly reconfigures equipment to address demand changes	3.0	1.3	11.4	36.9	47.5	4.369	0.360
Rapidly changes manufacturing processes to address demand changes	7.2	12.7	4.7	14.0	41.7	4.588	0.366
Rapidly adjusts capacity to address demand changes	2.1	3.2	20.3	36.9	37.3	4.369	0.348
<b>Grand Mean</b>						<b>4.498</b>	

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Results indicated that the supply chain operating system responds rapidly to changes in product volume demanded by customers (mean 4.921) and rapidly changed manufacturing processes to address demand changes (mean 4.588). However, the systems showed possible weaknesses in responding rapidly to changes in product mix as demanded by customers (mean 4.369), effectiveness expediting emergency customer orders (mean 4.369), rapid reconfiguration of equipment to address demand changes (4.369) and rapidly adjustment in capacity to address demand changes (mean 4.369). The study shows the analysis of the responses of the supplier network to the changes in the needs of the customers.

**Table 4 Correlation Analysis between Network Monitoring Tools Outsourcing and Organizational Performance at Airtel Rwanda Plc.**

	Responds rapidly to changes in product volume demanded by customers	Responds rapidly to changes in product mix demanded by customers	Effectively expedites emergency customer orders	Rapidly reconfigures equipment to address demand changes	Quality	Time	Cost
Responds rapidly to changes in product volume demanded by customers	1						
	.56						
Responds rapidly to changes in product mix demanded by customers	.076	1					
	.189						
Effectively expedites emergency customer orders	.135*	.126*	1				
	.020	.029					
Rapidly reconfigures equipment to address demand changes	.153**	.070	.063	1			
	.008	.230	.276				
Quality	.041	.122*	-.123*	.031	1		
	.481	.035	.034	.600			
Time	.009	.077	.025	.019	.050	1	
	.883	.187	.666	.742	.385		
Cost	.000	.000	.035	.050	.005	.023	1
	.988	.988	.552	.394	.926	.692	

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Results felt that responds rapidly to changes in product volume demanded by customers is statistically insignificant with an increase of service quality ( $r=0.041$ ;  $p\text{-value}=0.481$ ). Responds rapidly to changes in product volume demanded by customers is statistically significant with timely service delivery ( $r=-0.009$ ;  $p\text{-value}=0.883$ ). Moreover, Responds rapidly to changes in product volume demanded by customers is statistically significant with cost was efficient and effectively used ( $r=-0.000$ ;  $p\text{-value}=0.988$ ). For the effect on Responds rapidly to changes in product mix demanded by customers on quality, time cost, the study ascertained that Responds rapidly to changes in product mix demanded by customers is statistically significant with quality ( $r=0.122^*$ ;  $p\text{ value}=0.035$ ). It was shown that Responds rapidly to changes in product mix demanded by customers is statistically insignificant correlated with time ( $r=-0.077^*$ ;  $p\text{ value}=0.187$ ), the Responds rapidly to changes in product mix demanded by customers is insignificantly with cost ( $r=0.007^*$ ;  $p\text{ value}=0.988$ ). All correlations were statistically insignificant given that the  $p$  value was  $> 0.05$  suggesting that an increase in Responds rapidly to changes in product mix demanded by customers did not increase the quality, cost and time and the vice versa. Results on effectively expedites emergency customer orders felt that it is significantly correlated with an increase of quality of services ( $r=0.123^*$ ;  $p\text{ value}=0.034$ ). Effectively expedites emergency customer orders is insignificantly correlated timely delivery of services ( $r=-.025^*$ ;  $p\text{ value}=0.666$ ), while, effectively expedites emergency customer orders is insignificantly correlated with cost efficiency ( $r=-.035$ ;  $p\text{ value}=.552$ ). Rapidly reconfigures equipment to address demand changes is insignificantly correlated with quality of services offered ( $r=0.031$ ;  $p\text{ value}=0.600$ ); with timely delivered ( $r=-0.019$ ;  $p\text{-value}=0.742$ ), while rapidly reconfigures equipment to address demand changes are insignificantly correlated with efficient and effective use of cost allocated to services ( $r=.050$ ;  $p\text{-value}=.394$ ).

#### **4.3 Assessment Effect of Supplier Network Responsiveness on Organizational Performance of Airtel Rwanda Plc.**

The third research objective assessed effect of Supplier Network Responsiveness outsourcing on organizational success at Airtel Rwanda Plc in Rwanda. The researcher begins with the assessment of how Supplier Network Responsiveness outsourcing is applied by Airtel Rwanda Plc.

**Table 5: Application of Supplier Network Responsiveness Outsourcing at Airtel Rwanda Plc**

<b>Supplier Network Responsiveness</b>	<b>Strongly Disagree %</b>	<b>Disagree %</b>	<b>Not Sure %</b>	<b>Agree %</b>	<b>Strongly Agree %</b>	<b>Mean</b>	<b>Sdv</b>
Major suppliers change product volume in a relatively short time	37.3	10.2	10.6	27.1	14.8	3.33	1.032
Major suppliers change product mix in a relatively short time	30.1	14.4	19.9	11.0	24.6	3.33	1.632
Major suppliers consistently accommodate our requests	14.4	1.7	5.5	8.1	70.3	2.83	1.169
Major suppliers have outstanding on-time delivery record with us	3.0	1.3	11.4	36.9	47.5	4.103	0.054
Major suppliers effectively expedite our emergency orders	7.2	12.7	4.7	14.0	41.7	4.103	0.152
<b>Grand Mean</b>						<b>4.155</b>	

**Source: Primary Data (2023)**

Results found that shows that the grand mean was 4.155. It was indicated that major suppliers consistently accommodated requests (mean of 4.712) and the major suppliers changed product volume in a relatively short time (Mean of 4.259). The areas with comparatively lower scores were those to do with major suppliers changing product mixes in a relatively short time (mean 3.647), major suppliers having outstanding on-time delivery record with the companies (mean 4.103), major suppliers effectively expediting emergency orders (mean 4.103) and major suppliers providing quick inbound logistics (mean 4.103).

**Table 6 Correlation Analysis between Supplier Network Responsiveness Outsourcing and Organizational Performance of Airtel Rwanda Plc**

	Suppliers change product volume	Major suppliers change product mix	Major suppliers accommodate our requests	Suppliers have outstanding on-time	Quality	Time	Cost
Suppliers change product volume	56						
Major suppliers change product mix	-.020	1					
Major suppliers accommodate our requests	.123*	-.060	1				
Major suppliers have outstanding	.113	.187**	-.007	1			
Quality	.052	.045	.080	.021	1		
Time	.027	.085	.105	.045	.050	1	
Cost	.031	.041	.013	.037	.005	.023	1

**Source: Primary data (2023)**

Results show insignificant negative correlations between major suppliers change product volume in a relatively short time and quality ( $r=0.052$ ,  $p\text{-value}=0.373$ ). Major suppliers change product volume in a relatively short time and timely delivered to beneficiaries ( $r=.027$ ,  $p\text{-value}=0.646$ ), Major suppliers change product volume in a relatively short time and effective use of cost allocated to services ( $r=0.031$ ,  $p\text{ value}=0.597$ ). A negative and insignificant correlation was found between Major suppliers change product mix in a relatively short time and increase of quality of services ( $r=0.045$ ,  $p\text{ value}=0.443$ ). The Major suppliers change product mix in a relatively short time is statistically insignificant with timely delivered to beneficiaries ( $r=0.085$ ,  $p\text{ value}=0.145$ ).The Major suppliers change product mix in a relatively short time was negatively insignificant with efficient and effective of cost ( $r=0.041$ ,  $p\text{ value}=0.482$ ). Furthermore, Major suppliers consistently accommodate our requests was insignificant with the quality of services ( $r=0.080$ ,  $p\text{-value}=.0169$ ), and Major suppliers consistently accommodate our requests was insignificantly correlated with efficient and effective use of cost ( $r=0.013$ ,  $p\text{-value}=.822$ ). Finally, the study found a significant correlation between Major suppliers consistently accommodate our requests and timely delivered of services to beneficiaries ( $r=0.105$ ,  $p\text{-value}=0.071$ ). Insignificant correlation was found between Major suppliers have outstanding on-time delivery record with us and quality of services ( $r=0.021$ ;

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p value=0.720), Major suppliers have outstanding on-time delivery record with us and timely delivered to beneficiaries ( $r=0.045$ ; p-value=0.440), Major suppliers have outstanding on-time delivery record with us and efficient and effective use of cost allocated ( $r=0.037$ ; p-value=0.524).

#### 4.4 Discussion of the Results

Results from this research concur with Gilley et al. (2014) who assess the influence of outsourcing for human resource actions on organization success. Secondary data evidenced that Airtel Rwanda Plc have attained 93.7% organizational performance growth in 2018, 89% for 2019, 87% for 2020, 87.7% for 2021 in general. Moreover, results indicate that Airtel Rwanda Plc increased their productivity by 7% in 2020, 6% in 2021, 4% in 2022 and 6% in 2023. Results indicated that the profitability in 2018 was 108.4, but 110.3% in 2019, 73.1 in 2020 and 87.2 in 2022 (Airtel Rwanda Plc, 2023). Khaki and Rashidi (2012), did research on outsourcing practices in 40 banks in Kenya. Those authors distributed questionnaire and interview guide on 40 banking institution operating in Kenya. The research assessed those strategies and challenges were related to outsourcing by taking sectors. Data from this research concurs with the observation from a research done by Muweesi (2011) when he specified that the culture of outsourcing had led to high performance in the Ugandan telecommunication sector by reducing operational cost, increasing production and transaction but also improving net profit.

The study second specific research objective was to ascertain the effect network monitoring tools services outsourcing and organizational performance. The present inferential statistics did not contradict with Pujals (2013) conducted descriptive research using 20 firms in European Union. Results indicated that banks could subcontract a variety of activities for different reasons and challenges. Some of the reasons and challenges given by Pujals (2013) were cost control, reduced risks, accessibility to innovation technologies, focus on core functions, quality amelioration. This study additionally assessed risks were associated with outsourcing of financial functions that were service and product follow up, losses, risk for operational service, internal knowledges and practices, dynamic losses, issues in cultural and social problems, challenges, quality and competitive advantages, implications from the study are there were positively association between outsourced practices and success of organizations.

The third research specific objective was to determine the effect of supplier network responsiveness and organizational performance of Airtel Rwanda Plc. These results relate to some of the previous researches like Wachida et al. (2013), utilizes a purposive sampling technique on the role of outsourced services on net profit and income among companies in Nairobi. This study discovered that to outsource some services might produce highly insignificant results relying on challenges met in business conditions and the ability of willingness to do transaction.

This research did not contradict the work of Kamanga and Ismail (2014) in a revision of previous studies on impact of outsourcing on success of Delmonte Kenya. Results showed that cost, quality, process transition, value addition and technology adoption have a positive correlation with the organizational success. Research comprises that there is unclear correlation between challenges and success. Mohamud and Iravo (2015) undertook research on impact of sourcing on non-key activities to the success of organizations. Results that provider's choice, staff skills, correlation with leaders, people, contract management and assets were key pertinent elements in outsourcing of related activities that affect institutional success in PPOA. The study felt that very research relied on outsourcing in telecommunication organizations.

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## 5.0 Conclusion

The study concludes that Airtel Rwanda Plc in Rwanda have outsourced financial system billing. To the objective, the researcher concluded that Airtel Rwanda outsourced financial system billing through unexpected demand change, adjust of warehouse capacity, varies transportation, and effectively delivers. These activities have affected positively the Airtel success. Airtel Plc had outsourced networking monitoring tools which play a pertinent role to the organizational success. The outsourced networking monitoring tools were the rapid changes in product volume, rapid changes in product mix, effectively expedites emergency, and rapidly reconfigures equipment to address demand changes. The telecommunication sector in Rwanda outsourced networking monitoring tools had affected positively Airtel success. Airtel has masts/towers and fleet management that contribute to organizational performance. In this regards, the suppliers change product volume, suppliers change product mix, suppliers consistently accommodate, and the major suppliers have outstanding on-time delivery record with us. The performance was problematic to organization future, doing to the fact that outsourcing back-office activities would be planned to give higher organizational performance. The study shows that outsourcing financial system billing is more to increase organizational performance followed by outsourcing financial and accounting services masts/towers and fleet management outsourcing.

## 6.0 Recommendations

There is a need to rely on obtaining financial system billing outsourcing, therefore telecommunication companies operating on Rwanda market should consider this and improve its organizational performance. The firm should adopt also the masts/towers and fleet management in means for enhancing suppleness, powers or decreasing challenges, accessibility to market or technology, that may be adequate outsourcing activities on small market in Rwanda. Additionally, for improving the level of completion, the government should revise competition policy, and contract duration for outsourcing activities. Future studies should consider conducting similar research in different types of companies for comparison of results with the aim of coming into consensus on the generalization of the results. Future research should be done in order to make comparison with other telecommunication companies to know whether results will be similar. Therefore, the same research should reveal different content. This study measured only three variables, however, there are many variables that may influence organizational performance growth, and other studies should assess effect of variables such as corporate governance, resource allocation and so forth on organizational performance in telecommunication sector.

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