

# **Perceptions of Professional Service Staff on the Effects of Outsourcing of Courier Services: Institution (X)**

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## **ABSTRACT**

The turbulence of business environment due to globalisation has influenced organisations such as institution (X) to outsource some of its business activities. The institution uses courier services to transport examination papers to and from external examiners, but this schedule became problematic. This increased pressure in terms of workload on the professional service staff members. The main aim of this study is to evaluate the effects of outsourcing of courier on performance service activities at institution (X). Statistical techniques were used to analyse the data collected. This study further aims to achieve the following objectives: firstly, to assess professional service staff's perceptions of the effects of outsourcing couriers services at the institution. Secondly, to examine the effects of the dynamics of examination process scheduling on courier service capabilities. Thirdly, to establish the extent of outside value-creation service sourcing to which resource-based view decisions enhance efficient operations at the institution. Fourthly, to evaluate the extent of outside value-creation service sourcing to which transaction cost economics' decisions are strategically derived. Finally, to assess the relationship between the perceived courier service performance requirements and the institution's decision process on resource capacity maximization and transaction cost containment. The main findings reveal that the factors to consider when outsourcing, especially during the examination period were flexible schedule, service excellence, innovative technology, an integrated logistics system, administrative work, courier value added service and increased efficiency. The adoption of these factors will confirm the decision to outsource is a good strategy for the institution.

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**Key phrases**

*Cost containment; increased efficiency; innovative technology; Outsourcing; professional service; restructure and service performance*

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## **1. INTRODUCTION**

Survival is a primary concern of all businesses, regardless of their location and size. Kocel (2011:11) defines outsourcing as “the transferring of some part or whole of an organisation’s activities classified as non-core competencies to suppliers or service providers that are experts in the field”. Several factors such as clock speed, environmental turmoil and globalisation motivate firms’ strategic decision to outsource (Bhalla & Terjesen 2012:167). According to Zigiariis (2000:7), the business process reengineering (BPR) strategy is based on radical change which includes operational functions and the reconfiguring of processes. The notion of reconfiguration brought about new concepts such as a lean system and outsourcing. Institutions such as institution (X) have expanded on this notion by using external entities to provide services (Quigley & Pereira 2011:1). Institution (X) uses courier services to transport examination papers to and from external examiners during the examination period (Quigley & Pereira 2011:.3). To remain competitive yet still make a profit, courier companies must offer excellent services in the form of adhering to pick-up and delivery schedules. Hence, the focus is on optimization of the delivery and pick-up process (Moussaid, Azouazi & Omri 2009:1756). Nonetheless, professional staff known as teaching administrators at institution (X) confronts considerable pressure in dealing with delays in courier deliveries during the examination period hence affecting operational processes across the institution. Thus, the professional staff members’ perceptions of outsourcing of courier activity effects at institution (X) to ensure that the institution’s key performance indicators are not undermined is the objective of this study. The professional service staff work closely with the service providers hence their view on relevant aspects of this study is important. The study examined the logistics service quality (LSQ, of the courier service company “using variables that include: accuracy/condition of order, quality of information, timeliness and availability/quality of personnel” (Ho, Teik, Tiffany, Kok & Teh 2012:257) to

determine whether the courier service utilises this dimension to satisfy its customers. The logistics service quality is aligned to the third objective.

## **2. RESEARCH PROBLEM AND OBJECTIVES**

The institution does not have sufficient operating resources and relies on subsidies and sponsorship to stay afloat as the cost of running the institution is increasing. The examinations period is a very busy time for institution employees, especially the professional services division that handles the transfer of marked examination scripts between lecturers and external examiners and captures marks promptly.

It is expected that all marked scripts should be promptly transferred to external examiners and vice versa, within a stipulated time of ten (10) days. A key problem of delay exists, however, in the handling of the courier service, especially during periods of high demand such as the examination period. The true measure of success lies in an organisation's efforts to continually satisfy its customers through service delivery. In other words, the service experience offered by courier companies to their customers has a critical influence on organisational profits since it is associated with customer satisfaction, retention and loyalty (Mohsin, McIntosh & Cave 2005:108-116). The main research objective is to evaluate the effects of outsourcing of courier service activities at institution (X). Services at the same time are evaluated positively when the promise of value delivery is achieved (Parasuraman, Zeithaml & Berry 1985:41-50; Zeithaml, Berry & Parasuraman 1988:35-48).

## **3. THEORETICAL FRAMEWORK**

Rajkumar, Dahiya & Dalal (2013:39) suggested that for a higher education institution to prosper, research, teaching and learning (institution (X)'s core competence) must remain the major focus. The research problem is linked to these two outsourcing theories: transaction-cost economics (TCE) and resource-based view (RBV).

### **3.1 Resource Based View**

The resource-based view was developed by Birger Wernerfelt in 1984. It explains a firm's ability to remain sustainable through competitive advantage. Brewer, Ashenbaum & Ogden (2013:177) noted that the resource-based view is more internally-focused, suggesting that competitive advantage can be achieved through using valuable, non-substitutable, rare,

imitable resources. Superior performance and competitive advantage are enabled through harmonizing resources in the supply chain (Tokman, Richey, Deltz & Adams 2012; Zacharia, Sanders & Nix 2011).

### **3.2 Transaction Cost Economics**

Transaction cost economics was introduced by Coase in 1937. The theory states that any activity that is provided internally has its own cost: production or transaction cost (Coase 1937; Dibbern & Heinzl 2009:101; Kamyabi & Devi 2011:88). According to Brewer *et al.* (2013:92) transaction cost economics is concerned with firm borders and explains whether an activity or a particular transaction is carried out within the hierarchy of firm governance, or outsourced. An activity possesses both transactional and behavioural attributes. Brewer, Wallin & Ashenbaum (2014:2) transactional attributes include frequency, uncertainty and asset specificity which are important in procurement decisions. (Chandler, McKelvie & Davidsson 2009:375; Javalgi, Dixit & Scherer 2009:159; Thouin, Hoffman & Ford 2009:264). The theoretical contribution of this study to the existing body of knowledge on outsourcing includes exploring outsourcing theories that have been studied to understand its paradigm in relation to services that can allow for a collaborative relationship between the service providers and institution (X).

## **4. LITERATURE REVIEW**

### **4.1 Nature on Outsourcing**

Globalisation has come to stay. The corporate world is constantly seeking ways to create profit, maintain a competitive edge and remain in the game of business. Rajkumar *et al.* (2013:39) note an increase in the number of higher education providers, particularly in the private sector. They highlighted that universities will remain the principal social organisations for knowledge acquisition and professional training. To this effect, outsourcing is a type of privatization in which an institution contracts an outside provider to handle a campus activity. According to Gomez, Parra, Gonzalez, Crespo & Leon (2009: 829-836), outsourcing can be defined as “the total or partial delegation of business activities to another company with some administrative and operational control parts”. This implies that organisations takes decisions to outsource based on the activities that are its core competence, resulting in a

lean business structure, bottom line improvement and excellent performance (Kinange & Murugaiah 2011).

#### **4.2 Core and Non-Core Activities**

Organisations have realised that greater competitive edge can be gained through engaging service providers outside their boundaries for performance improvement such as dependability, responsiveness, flexibility and quality (Gunasekaran, Irani, Choy, Filippi & Papadopoulos 2015:154). Outsourcing some of an organisation's non-core activities does not necessarily mean that such activities cannot be performed in-house but this strategy is adopted to enable the organisation to focus on its core activity. Outsourcing has offered organisations opportunity to exploit their strengths as suggested in a strength, weakness, opportunity and threat (SWOT) analysis in their core competencies, reduce capital costs and consequently satisfy customers' needs (Bustinza-Sanchez, Arias-Aranda & Gutierrez-Gutierrez 2010:277). Kroes & Ghosh (2010:126) note that RBV emphasises distinctive resource trait such as capabilities, processes and capital assets. Clearly, it can be seen how the RBV criteria can be used through focusing on core competence and capability to create value that may lead to superior performance and sustainable competitive advantage. Hence, it is suggested that institution (X) management need to think about how and to what extent the organisation's resource and strategic capabilities can be managed through outsourcing. This is achieved by means of interactive relationships with suppliers whereby key business processes are inter-woven with the firm's objectives and long-term strategic plans (Garfamy 2012:140). This enables organisations to keep abreast of the latest technology and achieve healthy profits.

#### **4.3 Conceptual Description of Outsourcing**

Outsourcing is described as procuring some service or products which firms used to provide internally from external suppliers. Outsourcing is also a form contractual agreement with a service provider and these exist between the courier company and institution (X) whereby all parcels are collated at a centralised hub and distributed to different locations through logistics means. According to Susarla, Barua & Whinston (2006), application service provider (ASPs) are companies that offers individuals access on the internet to services that would have been on the company's computers. This application is handled by customers. ASP is sometimes defined as a form of application outsourcing (Johansson & Carlsson

2002). Courier companies are related to ASPs as they provide their customers with the real time information pertaining parcel locations and performance measures associated with the delivery (Fastway Couriers 2014). For instance, when hand held devices or scanners are used to scan parcels either at pick up, sorting hub or destination. A local network allows the data to be relayed to the central website of the courier company where the customer can access the status of the parcel to know if it has been delivered. This can be done using the tracking number given to the customers by the courier company. Bayrak (2013) identifies some of the attributes required of an (ASP) including assurance, empathy, security, system quality, information quality, availability. These features/traits are also employed as quality dimensions of services requirement of the courier services (Karcz & Slusarczyk 2016). Chou, Techatassanasoontorn & Hung (2015:30) define Business Process Outsourcing (BPO) “as the allocation of one or more information technology (IT)-enabled business activities to an outside supplier that takes up responsibility of managing the activity to attain its client firm’s measurable and defined set of performance objectives”.

#### **4.4 Driving Forces of Outsourcing**

The core drivers of outsourcing seem to have shifted from cost issues to issues of strategy such as core competence and flexibility in delivering services (Niskanen 2013:35). The drivers include flexibility, quality, innovativeness, time, cost, maintaining a competitive position and customer demand. Cost competitiveness improves because firms can eliminate activities that are unproductive and redeploy their assets towards cost reduction (Kroes & Ghosh 2010:126). Organisations that focus on flexibility are expected to respond effectively to dynamic customer needs and requirements since firms are becoming more responsive in their service offering (Patil & Patil 2014:407). Innovativeness focuses on supplying products of novel and technological features while quality involves the performance and conformance value of a product that exceeds customer expectations. Timeliness relates to a fast response in terms of providing goods and services to obtain better on-time performance (Kroes & Ghosh 2010:127; Mclvor 2005:11). In contrast to Kroes & Ghosh (2010:126), Kramer and Kramer (2010) suggested that there are three main categories of outsourcing motivations: cost, strategy and politics. Heizer & Render (2011:67) examine competitive advantage via differentiation, low cost, and response.

#### 4.5 Courier Logistics

According to Kunaka, Mustra & Saez (2013:2), logistics services are defined as “an essential determinant of any country’s connectivity to the global markets and their competitiveness”. In the context of logistics, parcel/courier service delivery is referred to as third party (3PL) service provider who promotes smooth conveyance of goods in the supply chain (Choi, Laik & Shung 2013). Courier service delivery includes a time responsive transportation that poses a huge problem to providing an on-time and fast response customer service. In the context of logistics, parcel service delivery is usually referred to as third party (3PL) service provider.

The 3PL promotes smooth conveyance of goods in the supply chain. Parcel service delivery involves carriers that transport items which can be handled by a person (Choi *et al.* 2013). The performance indicators of a good logistics transportation system include suitability, accessibility, goods security, transit time, reliability and flexibility (Pienaar & Vogt 2012:29; Yee & Daud 2011:2). Hsiao, Kemp, Van der Vorst & Omta (2010:78) suggest that value is created by logistics through accommodating customers’ delivery requests in a cost-effective manner.

A courier is a company or person hired to convey mail, messages and packages (Oko 2014:34). In contrast to regular mail, couriers offer additional services such as security, speed, committed delivery times and customized services at a premium rate and is characterised by efficient and smooth coordination of transportation, delivery and collection of items from specified locations to a defined destination. However, De Marco, Carliano, Mangano & Perfetti (2014:500) note that limitations such as traffic congestion and uncertainty may negatively impact performance. Courier services are known for their demand-responsive transportation which offers on-time and rapid-response customer service.

The dynamics associated with changing customer demands, such as new customer instructions as well as order withdrawals, often occur after the couriers have been dispatched. This hampers the accomplishment of a pre-determined courier routing schedule and could cause an increase in transportation costs and customer service delays. The different logistics systems that can be adopted can be integrated, isolated or linked. With this statement (Amstel 2015), means that an integrated system is synchronised or decisions are built decision on guidance of flow of goods. There is existence of varied communication

systems that carry out effective transition of consignments (Stefansson 2002). “An integrated logistics development strategy for the courier sector is timely as digital” (Noordin, Hasnan & Osman 2012). Described as coordination of inbound supply with production and distribution, integrated logistics extends its impact from upstream to downstream part of the supply chain (McKinnon 2001). It involves coordinating logistics closely to other business functions. Logistics system consists of physical distribution, internal and external linkages (Lambert 2008). Internal linkage has to do with the internal coalition of processes and consignments.

In the case of courier services, there should be a hub centre that houses all collated parcels before sorting for distribution purposes. Linked logistics, also known as intermediaries, assist companies to transport, store, ship and distribute goods from a seller to a buyer or to end consumer for a fee (Skender, Host & Nuhanovic 2016). Intermediaries facilitate operations in companies in terms of delivery. Their job is to mediate between parties. Intermediaries can be a middleman, hybrid form and service provider (Schramm 2012).

Isolated logistics has to do with when the courier services are not linked to its clients' database. On receipt of parcels, courier companies take the action of delivering the goods without notifying its client of their intended visit to the client. Clients' expectations of parcels depend on courier's initiative to deliver on time. This type of logistics system comes with the disadvantage of failing to deliver to a customer that may not be available as expected by the courier company. More so, the courier company is seen not to deliver on its promises.

#### **4.6 Examination Scheduling**

A schedule is a timetable for executing activities, utilising resources, or facility or assigning jobs to employees in each period. Scheduling is the core of a process (Jacobs & Chase 2011:664). For this study purpose, a short-term schedule is discussed which is characterised by reduced completion time, maximising utilisation and minimising customer waiting time. Educational institution such as institution (X) are characterised by workflows, graduation ceremonies, tests and examination periods, making it a complex and dynamic environment. These activities are subject to a schedule to ensure the institution's smooth operation. The examination period is the busiest period in higher education institutions where almost all the staff is expected to contribute because virtually everything else comes to a halt. The courier company offers a short-term schedule and expected to provide optimal service hence accommodating institution (X)'s examination timeframe and schedule. While the institution



creates supply relationships, it expects the suppliers to perform optimally. However, it is vital to establish whether the scheduled time for examinations at the institution is reliable and flexible for the professional service staff or the schedule is too tight and compressed since examinations are conducted at the same time in every School on all the campuses. Examinations are scheduled over a period of two (2) weeks whereby the school administrators must capture marks, collate and send them out for moderation.

Table 1 lists the institution's performance indicators, service quality dimensions and the qualities of a good courier company.

**Table 1: Service Performance Comparison**

Institution (X) key performance indicator	Dimensions of service quality	Qualities of a good courier company
1. Responsiveness	1. Responsiveness	1. Responsiveness
2. Delivery	2. Service reliability	2. Reliable delivery
3. Product quality	3. Tangible	3. Suitability
4. Documentation	4. Assurance	4. Accessibility
	5. Empathy	5. Transit time
		6. Competence
		7. Price competition
		8. Communication

Source: Designed by researcher to show Service performance comparisons

## 5. RESEARCH METHODOLOGY

### 5.1 Research Strategy/Purpose

According to Saunders, Lewis & Thornhill (2012), research strategies are helpful to collect valid data that can assist to achieve the research aims and objectives. This study employed an exploratory research design. Moreover, there is little knowledge of professional service staff's perceptions of courier service providers at institution (X). This study adopted a

quantitative research approach (UKaid 2013:4). Creswell (2014:4) describes quantitative research as a means of testing theories by investigating the relationship variables.

## 5.2 Sampling design and sampling technique

The target population for this study was the Schools' professional service staff members (teaching administrators) in the four different Colleges on the institution's campuses. According to the data obtained from the various Schools' operation managers, there were approximately 184 teaching administrators. Probability sampling was employed; the respondents represented all professional service staff. The strata were the institution's four Colleges which comprise of 19 schools ensuring homogeneity within each College. The school administrators selected included 53 in College of Agriculture, Engineering and Science, 54 in the College of Health Sciences, 34 in the College of Humanities and 43 in the College of Law and Management Studies. A disproportionate stratified random sampling of about 124 was targeted. See Table 2.

**Table 2: Disproportionate Stratified Random Sampling Design**

Category	Number of elements	Disproportionate Sampling
College of Agriculture, Engineering and Science	53	34
College of Health Sciences	54	40
College of Humanities	34	20
College of Law and Management Studies	43	30
<b>Total</b>	<b>184</b>	<b>124</b>

The bar chart displays the number of school administrators in each of the four colleges. The y-axis represents the number of administrators, ranging from 0 to 60. The x-axis lists the colleges. The bars are blue and labeled with their respective values: 53 for the College of Agriculture, Engineering and Science; 54 for the College of Health Sciences; 34 for the College of Humanities; and 43 for the College of Law and Management Studies.

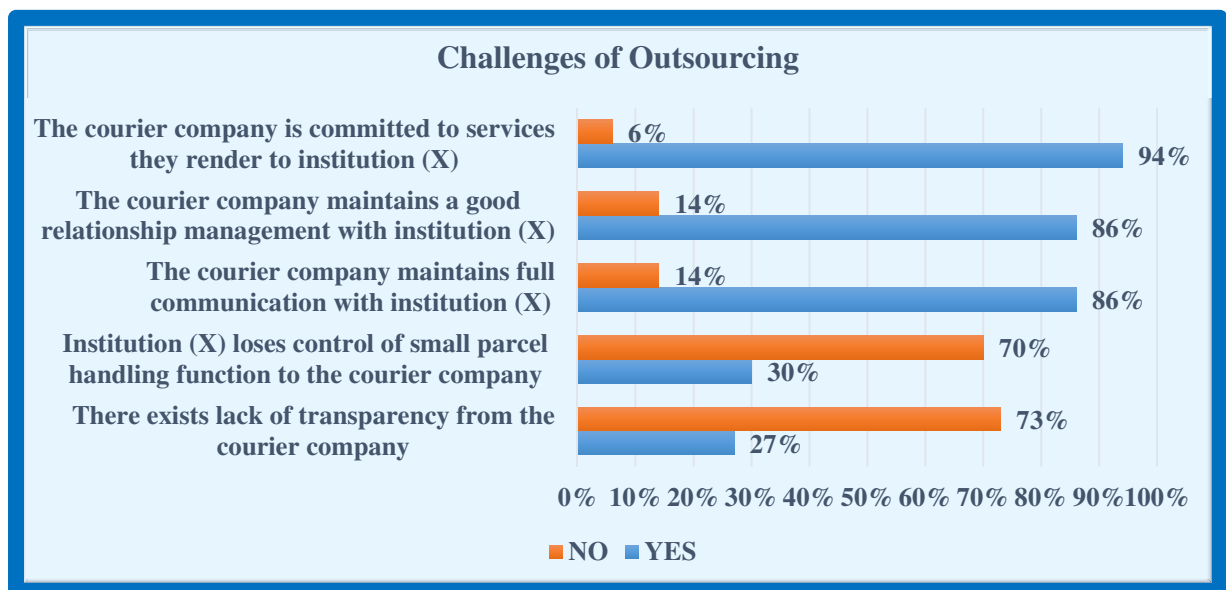
Source: Designed by researcher'

According to Simons (2009:89), the study site is the exact location where the data is collected. A sample is expected to be as large as possible for generalisability. Isreal's (2013:3) table for sample size for a given population was used in this study. A hundred and thirty questionnaires were distributed and 124 were returned, thereby conforming to the table and representing a 95 % return rate.

### 5.3 Data Collection Method and Instruments

A personally administered questionnaire was used adhering to the ethical principles with permission to conduct the study obtained from the institution's Research Office and no monetary benefits were given to the respondents. There were questions on biographical data, dichotomous questions and five-point Likert scale questions. The respondents picked out of two options for the last section. The information collected was processed using statistical software, the Statistical Package for the Social Sciences (SPSS®). See Figure 1 for challenges of outsourcing.

**Figure 1: Challenges of Outsourcing**



Source: Designed by the Researcher

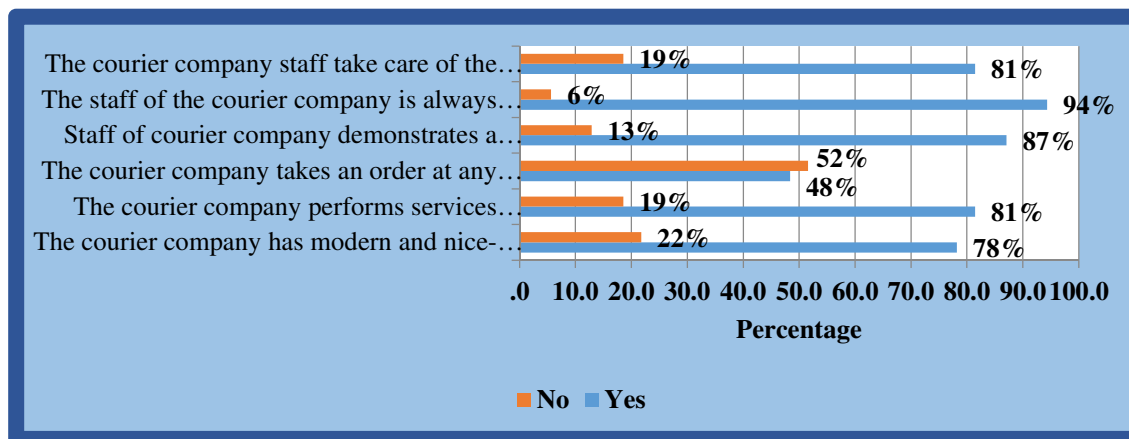
These questions focused on professional service staff's perceptions of the challenges of outsourcing. The figure reveals that most of the respondents believed that the institution does not lose control of small parcel handing, the courier company is committed to the

services they render to the institution, maintains a good relationship and communication with the institution. But a high percentage rate of respondents agrees that there exists lack of transparency from the courier company.

#### 5.4 Dynamics of Examination Process Scheduling

Most of the respondents agreed that the courier company gives timely communication on parcel delivery, more priority to the institution demand during examination period and that limited time for writing exams affect examination schedule coordination. Respondents do not agree that the courier company prioritise examination schedule and that the schedule is linked to the courier company database. See Figure 2 to for institution service quality.

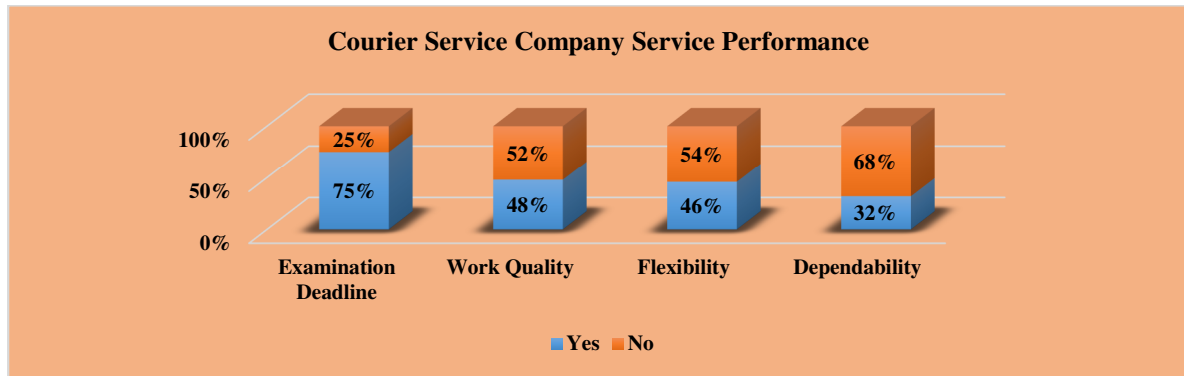
**Figure 2: Institution (X) Service Quality**



Source: Designed by the Researcher

The figure reveals that most of the respondents agreed that courier company cares for the interest of institution (X), has knowledge to respond to customers request, demonstrates willingness to assist staff during loss of parcel, performs service within a specified time and has nice looking packages. Respondents do not agree that the courier company takes orders at any time of day or night as stipulated in their offerings. See Figure 3 for service performance figures.

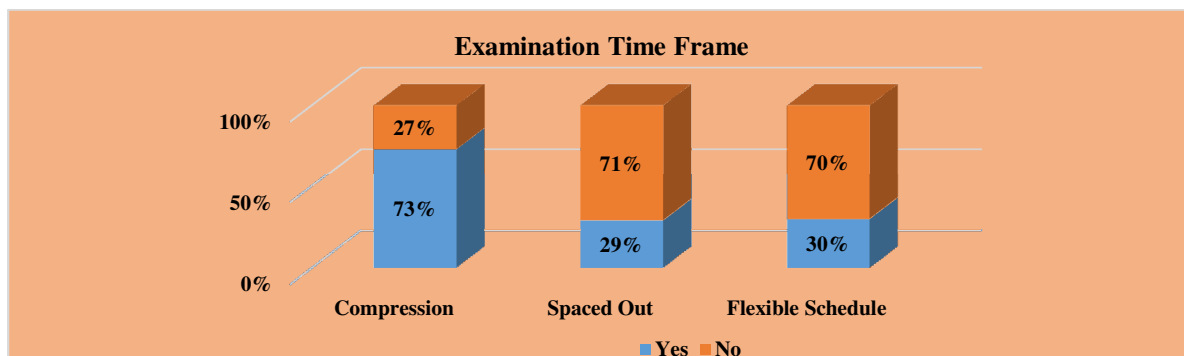
**Figure 3: Service Performance of the Courier Service Company**



Source: Designed by the Researcher

Respondents believed that examination deadline affects the services which the courier company renders to institution (X) but agreed their work quality, flexibility and dependability were better as it is. See Figure 4 for examination time frame.

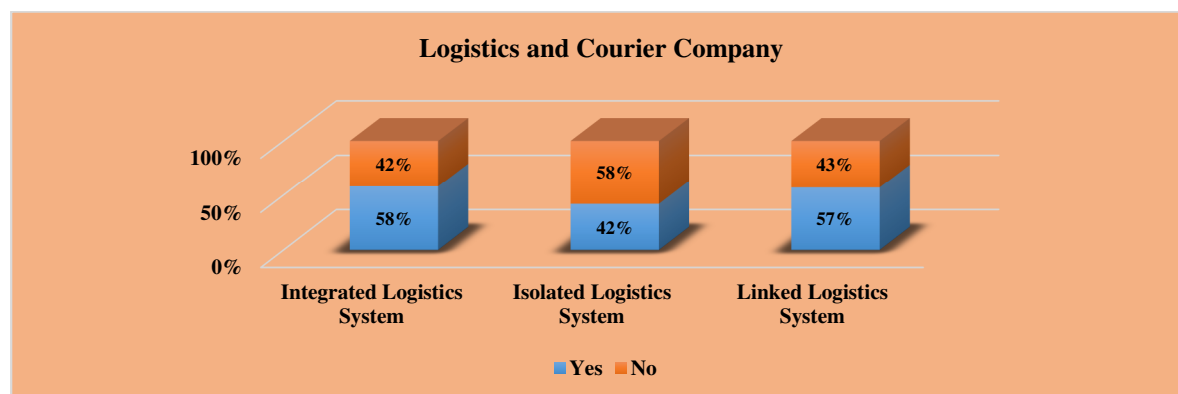
**Figure 4: Examination Time Frame**



Source: Designed by the Researcher

Respondents agreed that because the examinations are compressed in just two weeks' interval, which affects the services of the courier company. Hence a high rate of respondents agreed that the examinations should be spaced out and the schedule should be flexible.

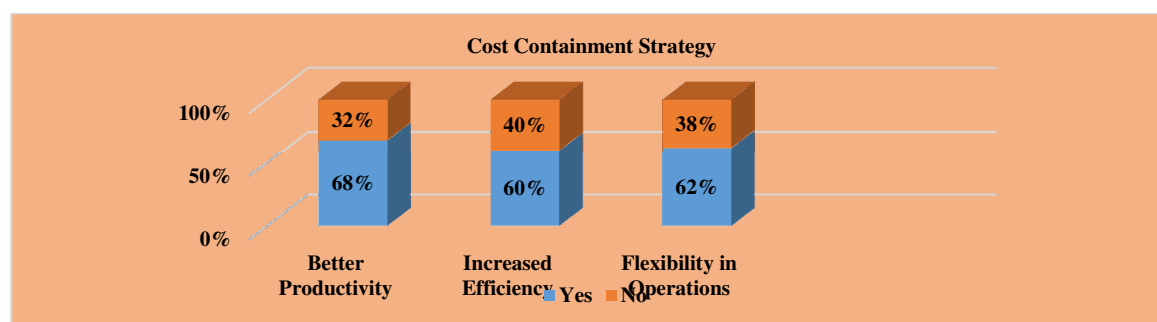
**Figure 5: Logistics and Courier Company**



Source: Designed by the Researcher

The result indicated that a good number of respondents concurred that the logistics system should be integrated and linked between institution (X) and the courier company while a high rate of 58% respondents agreed that the system was isolated. See Figure 6 for cost containment strategy.

**Figure 6: Cost Containment Strategy**



Source: Designed by Researcher

The respondents literally concurred that better productivity, increased efficiency and flexibility in operations are good cost containment strategy for institution (X).

**Table 3: Descriptive Statistics from Resource Based View**

Descriptive Statistics from Resource Based View				
Statistics				
	Courier value added service	Administrative work	Capabilities and service excellence	Innovative technology
Mean	3.66	3.50	3.58	3.55
Median	4.00	4.00	4.00	4.00
Mode	4	4	4	3
Std. Deviation	1.058	1.186	1.029	1.031
Skewness	-.580	-.550	-.585	-.539
Std. Error of Skewness	.217	.217	.217	.217
Kurtosis	-.116	-.474	.137	.234
Std. Error of Kurtosis	.431	.431	.431	.431
Range	4	4	4	4
Descriptive Statistics from Transaction Cost Economics				
Statistics				
	Cost efficient and cost containment	Frequency to deliver	Cost measurement	Examination parcels handling
Mean	3.24	3.44	3.33	3.71
Median	3.00	3.00	3.00	4.00
Mode	3	3	3	4
Std. Deviation	.999	.998	.977	1.160
Skewness	-.405	-.340	-.071	-.586
Std. Error of	.217	.217	.217	.217

<b>Skewness</b>				
<b>Kurtosis</b>	-.076	-.101	-.012	-.592
<b>Std. Error of Kurtosis</b>	.431	.431	.431	.431
<b>Range</b>	4	4	4	4

Source: Designed by Researcher

According to Cohen, Manion & Morison (2011:622), descriptive statistics allow researchers to interpret the data produced by statistical analysis. The variables (Courier value added service, Administrative work, Capabilities and service excellence and Innovative technology), has a range of 4, standard deviation less than the mean, indicating little variation in the data. The median and mode is 4. Courier value added services has the highest mean value of 3.66 hence contributing more value to institution (X) in the form of competitive advantage. Capabilities and service excellence (3.58) showing that since the courier services usage at the institution, efficiency and excellence has been realised in use of resources (Kamyabi & Devi 2011:92). Adopting the latest innovative technology (with a mean value of 3.55) is essential in assisting the institution to achieve competitiveness in the higher education sector.

The four variables have a negative skewed value ranging from -0.59 to -0.54 with scores clustering towards the right upper end of the scale. The kurtosis value ranges from -0.12 to 0.23 with the distribution clustered at the centre. The other remaining variables (Frequency of delivery, cost measurement and cost efficient and cost containment has a mean value that lie between 3.24 and 3.71). Examination parcel handling has the highest mean value of 3.71 and was a crucial cost reduction strategy. The Frequency to deliver variable has a mean of 3.44. indicating that although the courier company easily picks and delivers institution (X)'s parcels but unforeseen circumstance such as traffic congestion can prevent the courier company from offering good service to the institution. The skewness is a negative value ranging from -0.59 to -0.07, with scores clustering towards the right upper end of the scale. The kurtosis value ranges from -0.60 to -0.01 with the distribution is clustered in the centre.



## 5.5 Factor Analysis

Graham (2010:40) describes factor analysis as “a statistical method for classifying sets or collections of variables. See Table 4.

**Table 4: KMO and Bartlett’s Test, Communalities, Total Variance Explained, Rotated Component Matrix**

Kmo Sampling Adequacy	Bartlett’s Test of Sphericity			Rotated Component Matrix			
	Approx Chi- Square	Df	Sig.	Factor loading	Eigenvalue	% of Variance	Cumulative %
.868	593.7	28	.000				
<b>Factor One: Courier Value Added Service and Effectiveness</b>							
Administrative Work				.873	1.122	14.023	73.470
Courier Value Added services				.845	4.756	59.448	59.448
Courier Service Excellence				.800			
Examination Parcel Handling				.646			
<b>Factor Two: Cost Management and Efficiency</b>							
Cost Measurement				.884			
Frequency to Deliver				.860			
Cost Efficient and Cost containment				.797			
<b>'Extraction Method: Principal Component Analysis., Rotation Method: Varimax with Kaiser Normalisation., Reliability Statistics: Overall Cronbach’s Alpha = 0.902, and Number of items = 8”.</b>							

Source: Designed by Researcher

The use of factor analysis allows one to condense the items number to a manageable factor. The Kaiser-Meyer-Olkin (KMO) score of 0.87 > 0.6 indicates sampling adequacy. The result from the KMO is 0.868, and the Bartlett’s test is significant ( $p = 0.000$ ), therefore the factor analysis is suitable at 28 degree of freedom. In table, only the first two components have

eigenvalues above 1 (4.756, 1.122). These two components describe a total of 73.47% of the variance. A scree plot allows one to identify the number of components extracted using Kaiser Criterion (Pallant 2011:83). Using the Varimax rotation, component 1 explains 37.93% of the variance and component 2 explains 35.54%. The total variance explained (73.47%) does not alter after rotation, only just the way it is dispersed between the two components.

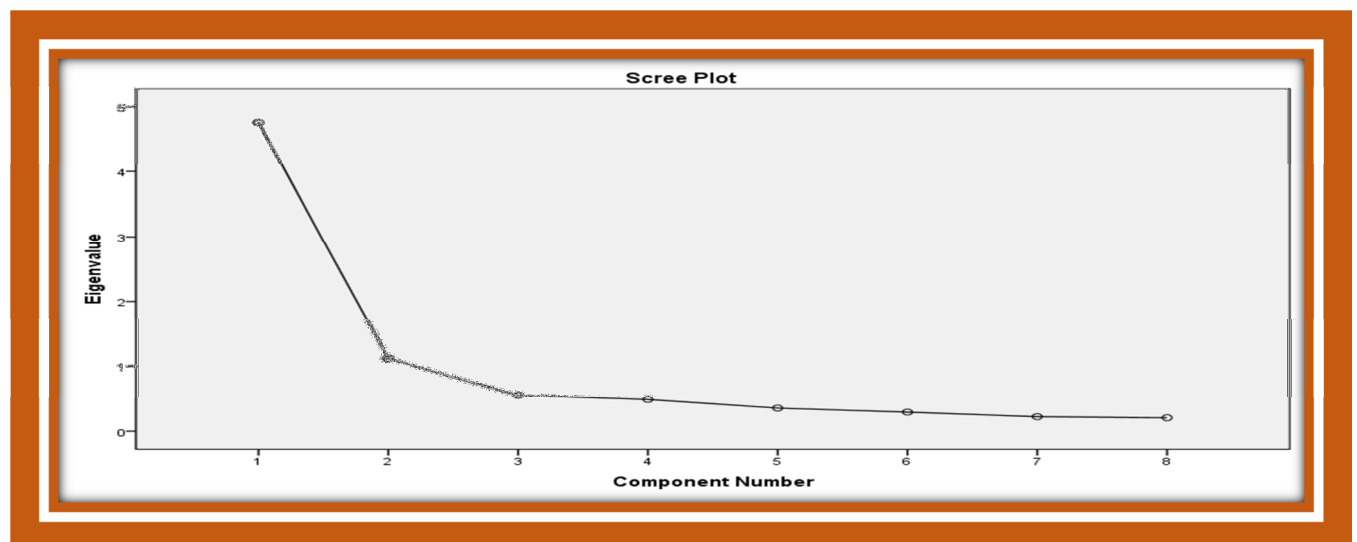
**Factor One: Courier Value Added Service and Effectiveness**

This factor retains the highest loadings from the two factors extracted (courier value added service) and also has the highest variance of 59.45%. The second highest factor (administrative work) has a variance of just 14.03%. They are independent but when combined, outline impressive benefits such as efficient and flexible operations, improved work quality, better productivity which can lead to an increase in the bottom line of any organisation and most importantly, effective use of limited resources.

**Factor Two: Cost Management and Efficiency**

This factor refers to costs, and how the insitution has attempted to contain costs, while at the same time measuring the costs it incurs in terms of the courier service and how frequently this kind of delivery has been achieved.

**Figure 7: Eigenvalue Scree Plot**



Source: Designed by the Researcher

All points appear in a descending order of the listed eigenvalue magnitude (Pallant 2011:294). The scree plot identifies only two components as the most critical with little contribution to solutions displayed by the lower end components.

## 6. MULTIVARIATE ANALYSIS

### 6.1 Multiple regression

This model can be analysed further with respect to the degree of explanatory power, variation and model fit. See Table 5 for model summary.

**Table 5: Model Summary, ANOVA, Coefficients**

Model Summary								
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson			
1	.776 <sup>a</sup>	.602	.578	.688	1.758			
Predictors: (Constant), Examination Parcels Handling (EPH), Frequency to Delivery, Administrative Work (AW), Innovative Technology, Cost Efficient and Cost Containment, Cost Measurement, Capabilities and Service Excellence (CSE)								
ANOVA								
Model		Sum of Squares	Df	Mean Square	F	Sig.		
1	Regression	82.896	7	11.842	25.032	.000 <sup>b</sup>		
	Residual	54.879	116	.473				
	Total	137.774	123					
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.645	.272		2.374	.019		

<b>AW</b>	.296	.074	.332	3.979	.000	.494	2.023
<b>CSE</b>	.377	.101	.366	3.728	.000	.355	2.813
<b>EPH</b>	.200	.074	.220	2.699	.008	.518	1.930

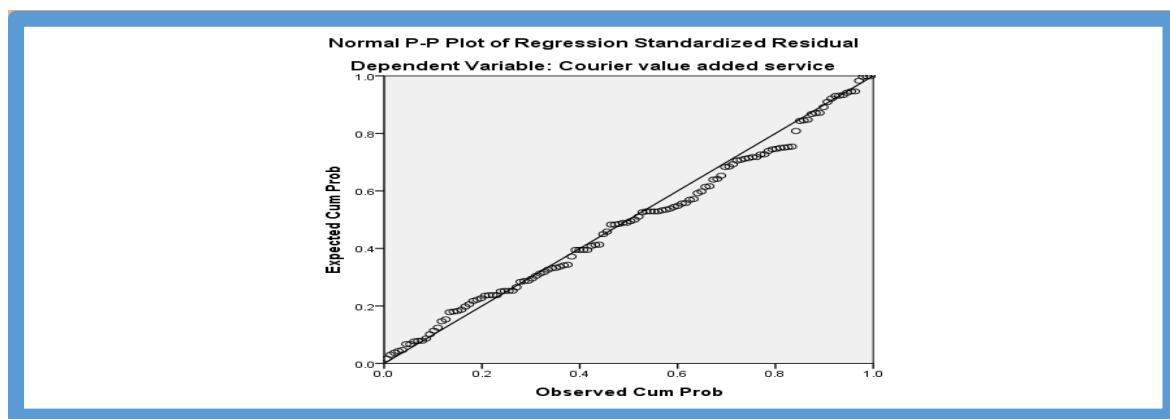
Source: Designed by the Researcher

The R squared value is 0.602 in model 1, explaining the variation in courier value added service as the predictor (independent) variables are added to the model. The adjusted R squared is 0.578. The Durbin Watson statistics is 1.758. The actual value should be between the range of 1.5 and 2.5. The ANOVA table yields an F statistics value of 25.032 and significant  $p$ -value of 0.000. Only three variables have a significance value of 0 and it is then concluded that a relationship exists between the dependent variable (courier value added service) and these three independent variables (administrative work, capabilities and service excellence and examination parcels handling).

## 6.2 Normality and Linearity

The normality and linearity plot of regression ensures that variances in common are not violated. See Figure 8 for P-P Plot.

**Figure 8: Normal P-P Plot of Regression Standardised Residual**



Source: Designed by the Researcher

From the plot, most of the points lie in a reasonable straight diagonal from bottom left to top right. This indicates that there are no major deviations from normality. In Table 6 the statistics are shown.

### 6.3 Reliability and Validity

**Table 6: Reliability Statistics**

Cronbach's Alpha	.901
No of Items	8

Source: Designed by the Researcher

Cronbach's Alpha tests the reliability of an instrument and describes the internal consistency of a study. The range is between 0 and 1, and when a value is closer to 1, it means more internal consistency. Through assessing eight (8) variables on the five point Likert scale, the Cronbach's Alpha of the instrument is 0.901. Hence, the instrument is reliable. See Table 7 for Pearson correlation

**Table 7: Pearson Correlation**

		CVAS	AW	CSE	IT	CEC C	FTD	CM	EPH
Pearson Correlation	CVAS	1.000	.674	.697	.462	.463	.443	.361	.595
	AW	.674	1.000	.673	.532	.364	.409	.312	.532
	CSE	.697	.673	1.000	.663	.550	.531	.454	.592
	IT	.462	.532	.663	1.000	.478	.560	.569	.501
	CECC	.463	.364	.550	.478	1.000	.715	.634	.503
	FTD	.443	.409	.531	.560	.715	1.000	.740	.456
	CM	.361	.312	.454	.569	.634	.740	1.00 0	.530
	EPH	.595	.532	.592	.501	.503	.456	.530	1.000

<b>CVAS = Courier value added service</b>	<b>AW = Administrative work</b>
<b>CSE = Capabilities and Service excellence</b>	<b>IT = Information technology</b>
<b>CECC = Cost efficient and cost containment</b>	<b>FTD = Frequency to deliver</b>
<b>CM = Cost measurement</b>	<b>EPH = Examination parcel handling</b>

Source: Designed by the Researcher

Values between 0.4 and 0.6 show a moderate relationship whilst correlation values that are greater than 0.7 are considered a strong positive relationship. Most of the variables in the correlation table 1.7 have a moderate positive relationship whilst a few have a strong relationship. Validity defines an accurate measure of an instrument. The results from the table above shows that in using construct validity, the researcher actually measured the constructs of interest, therefore the instrument is valid.

## **7. RESULT DISCUSSION**

### **Objective One: Professional Service Staff's Perceptions of the Challenges of Outsourcing Courier Services at the institution (X)**

Most respondents believed that institution (X) does not lose control of small parcel handing, the commitment of the courier company to the services they render to the institution, maintains a good relationship and communication with the institution. However, some respondents agreed that there exists lack of transparency from the courier company. Lack of transparency can be in form of fulfilling its promises on 24-hour delivery, meanwhile courier companies closes its doors daily to customers at 4pm. There are also instances of loss of goods, but delivery is made under the guise of fulfilling its tasks. The lack of clarity on customer expectations when goods are lost in transit. It is therefore suggested that institution (X) management should consider the service providers' contract to it to reflect these concerns.

### **Objective Two: The effects of the Dynamics of Examination Process Scheduling on the Capabilities of Courier Services**

Most respondents agreed that the courier company communicates timely on parcel delivery, gives more priority to institution (X) demand during examination period and that limited time for writing exams affect examination schedule coordination. Respondents does not agree

that the courier company prioritise the institution examination schedule and that the schedule is linked to the courier company database. This indicates that institution's examination schedule needs to be aligned with the services of the courier company to improve efficiency.

**Objective Three: Courier Company Attaining institution (X)'s Service Quality**

Most of the respondents agreed that courier company cares for the interest of institution (X), has knowledge to respond to customers request, demonstrates willingness to assist staff during loss of parcel, performs service within a specified time and has nice looking packages. Respondents do not agree that the courier company takes orders at any time of day or night as stipulated in their offerings. Once there is a good relationship between the parties, the quality of service will not be hampered or compromised.

**Objective Four: The Extent of outside Value Creation to which Resource Based View Decisions enhance Efficient Operations at institution (X)**

Most of the respondents agreed that outsourcing courier services offered institution (X) to gain competitive advantage in form of the efficient use of their available resources. To exploit these resources, it is suggested that the institution adopt processes such that there will be internal linkage with courier company that can allow the professional staff to view service status. It should be noted that while the courier function is outsourced, the actual collating of examination scripts and packaging is still carried out by professional staff, indicating that the parcel handling function is not eliminated. The respondents agreed that outsourcing of courier services has allowed the institution to gain access to complementary capabilities and service excellence hence enhancing the institution's performance. Nevertheless, some respondents do not acknowledge the use of technology to enhance efficient operations at the institution, as innovation in courier services is critical to their survival (Noordin *et al.* 2012). Without service technology innovation which offers better operational efficiency and faster time, space and place utility of logistics services, a resource may not contribute to growth in an organisation. Resource efficiency offers significant opportunities for economic growth and improved productivity and ultimately boosts competitiveness (Smits 2011:7).

Examples of such innovative technology used in courier services include accurate tracking device, drones, better delivery forecast estimates and Global positioning system (GPS) (Hillebrand, Thiele, Junk, Hildebrandt, Needham & Kortum 2016).

### **Objective Five: The Extent of outside Value Creation Service to which Transaction Cost Economics Decision are Strategically Derived**

The business cost of an institution follows a higher trajectory as these costs may increase above normal inflation. This is because teaching and learning are more labour intensive than other economic activities. From Kramer and Kramer's (2010:4) perspective, customers will always choose a logistics service provider that offers high delivery frequency because it is able to maintain average inventory holding costs at a minimum. It is important to maintain inventory holding costs at a minimum to reduce incurring unnecessary costs. Costs are reduced especially when the examination scripts which constitute the inventory will be picked up and delivered timely. Time can be a cost associated with the scripts. For instance, the time taken by courier company to convey the scripts to the examiner. If the scripts are not delivered and returned on time, the main or supplementary examination will be written without the input of the examiner. If these same scripts are sent to the examiner via electronic means (email) for vetting, the systems can be hacked. Another cost relates to cost of fixing a new date for examination when the scripts has not been returned from the external examiner. This incurs variable cost for the university in terms of venue booking, logistics associated with change of times, payment to internal examiners and timetabling reschedule. Frequency of delivery relates to efficiency in parcel delivery (examination scripts) to its destination (external examiners) and back by the courier company. If this aspect of the logistics service is well-catered for, every other variable will be achieved. The examination period is the single most crucial period at any institution and therefore, poor service quality in any aspect of the operations of the institution should not be tolerated. The examination period is cyclic in nature and is of high priority since it examines students' level of understanding of modules taught and is carried out at the end of a defined study period. The cost of ensuring that this sensitive period proceeds smoothly should not be the primary consideration as it is a short, single, defined period in an institution's annual plan. Hence, it is important to ensure that the required resources are available to ensure success whilst also considering the cost involved.

#### **7.1 Service Performance Requirements**

From the analysis, a relationship exists between variables such as maximum dependability, increased efficiency, an isolated logistics system, a compressed examination period, service



excellence and a flexible schedule. From the correlation result, no relationship exists between an isolated logistics system and increased efficiency. The frequency distribution also asserted that an isolated logistics system will not assist institution (X) to achieve the desired service performance.

## **7.2 Logistics and Multiple Regression Discussion**

Given growing competition among universities, responsiveness is a driving force for institutions like institution (X). The dependent variable from the dichotomous questions (responsiveness) is one of most vital dimensions of service quality. The likelihood of the courier company achieving every component in factor one is indicated in logistics regression where the only independent variable is the courier company's staff taking care of the interests of the institution.

The logistics regression outcomes suggest that by ensuring responsive service, the courier company will work in institution (X)'s interests especially during the examination period to achieve service performance. The multiple regression results show that courier value added service (dependent variable) is significantly affected by three predictor variables (administrative work, examination parcels handling, and capabilities and service excellence). To gain a competitive advantage, organisations such as institution (X) advocate for service excellence using its available resources, a strategy that it supported by this study's results.

## **7.3 Major Findings of the Study from the Research Objectives**

- The service performance of the courier company can improve the services rendered to the institution when both organisations integrate its value chain.
- Maintaining a good communication between institution (X) and the courier company. is important in the relationship and can be in form of email messages between both parties and the logistics dispensation of the service provider.
- The examination schedule of institution (X) should be directly linked to the services of the company to be able to share related information and coordinate its affairs.
- Limited time frame for writing examinations affect the schedule and hampers the service capabilities of the courier company.

- The significant finding in this study reveals that the courier company does not actually take order at any time of the day or night. From staff perceptions, it was identified that for the courier company to take out extra time for pick up or delivery of parcels involves additional costs from the institution. But one of the terms and conditions of the courier services relate to achieving a 24-hour service. When such promises are not obtained from clients, trust is lost hence may affect relationship.
- The courier valued added services, administrative work of the professional staff members, capabilities and service excellence of the courier company and innovative technology are the factors that impact sparingly on institution (X) operations. This confirms the resource based view philosophy that focuses on the internal aspects of an organisation using skills to achieve competitive advantage.
- Cost efficiency and cost containment, frequency of delivery and cost measurement are the factors which relate to institution (X)'s strategy to outsource courier services. These factors are indicators or strategy considered when outsourcing of products or services. TCE theory advocates for cost reduction to provide quality services. If institution (X) chooses the lowest cost of operation, activities like courier services outsourcing can prompt bottom line increase and profit margin expansion.

#### **7.4 General Implication**

The implication from the perspective of the service provider to the institution is on how best the customers can be served in terms of delivering the parcels to the external examiner and back. This will also strengthen the relationship between the institution and the service provider through the improved services that will be rendered. The professional service staff looks up to the courier company to meet up with the delivery so that students' marks can be released on time. The marks are highly dependent on the movement of scripts (scheduling of examination scripts). The professional service staff is the ones that coordinate the scripts in terms of students mark viewing and all activities that has to do with examination scripts. When these marks are released on time, students can view scores and those that has supplementary exam will prepare for it.

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