

Outsourcing and Performance of Federal Government Owned Hospitals in Nigeria: A Study of Hospitals in the South East Geopolitical Zone

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Abstract

This paper strives in consideration of outsourcing and performance of federal government owned hospitals in Nigeria with particular emphases in hospitals at the South East geopolitical zone. This study becomes imperative as most entities are always preoccupied on how best to improve on its operational performance and by extension, attain its goals and objectives. Specifically, the study strives to identify the degree of influence of outsourcing of: radiological services, security services, and transportation services on performance of Federal Government owned hospitals in the South East geopolitical zone of Nigeria. The study used primary data extracted from respondents selected from the three federal government owned hospitals in the south eastern states of Nigeria. The data collected was analyzed using regression analysis and analysis of variance. The findings of the study show that outsourcing of radiological services has negative and insignificant effect on performance of federal government owned hospitals in the South East Nigeria. The finding also indicates that outsourcing of security services and transportation services significantly and positively affect the performance of federal government owned hospitals in South Eastern States of Nigeria. The practical implication of these findings is that performance increases as minor responsibility are allowed in the hands of individuals (contractors) external to the hospitals thereby enabling full utilization of the skills of relevant workforce in the discharge of duties expected from them. Thus the percentage increase in the use of radiology, security services and transportation outsourcing lead to corresponding increase in the hospital productivity. Based on the findings, it is recommended for active use of outsourcing in the management of federal government owned hospitals in Nigeria.

Keywords: *Outsourcing, Radiological Services, Security Services, Transport and Carriage Services*

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I. Introduction

Most entities are always preoccupied on how best to improve on its operational performance and by extension, attain its goals and objectives. Undoubtedly, outsourcing is one of such business strategies and ideas that promote the purchase of services or products of an entity from external entity instead of making use of its own staff to produce such product or services with a view to attaining efficiency (Fiona, 2006). Outsourcing as a management practice, transfers job responsibility from an organization or industry to outside of the business (Nweze, 2014). Outsourcing or Contracting-Out occurs where the employer decides that work that is being done by its employees should no longer be done by them, instead, the work is to be done by employees of another organisation or by independent contractors, (National Tertiary Education Union (NTEU), 2015). The organisation that is outsourcing work will contract an external services provider or vendor to execute the tasks to be outsourced.

Preferably an external provider is chosen whose core competence is in the area of the work to be outsourced (Koers, 2015). Heric and Singh, (2010) found that 85% of those winners use capability-sourcing

broadly and strategically for everything from developing world-class talent to bringing new products to market faster and enabling business model innovation. In other words, they have moved a way beyond mere cost-cutting while cost reduction is usually an outsourcing goal; other factors should also be considered. These include capability and skill gaps with the in-house staff, improved service levels, improved efficiency, resource usage technology and infrastructure investment, and transformation potential.

Outsourcing public provision of services tends to lower labour intensity and increase its efficiency (Iza, 2015). It allows the business to get the work done for a fraction of the price. It also allows a business to skip costs such as health insurance and vacation pay. Many people choose offshore outsourcing because they receive quality at a much lower price. This trend known as intellectual outsourcing, has become a norm in several industries such as finance, pharmaceutical, insurance, technology, media, education, aviation and retail (Sheth, 2014). In an environment of growing demands from regulators and clients, heightened competition and a need to best position their firms for future growth, asset managers are increasing their reliance on outsourced services. In the Australia health sub-sector for instance, the Human Services Department directs that non-clinical and clinical areas be market tested through benchmarking services against the private sector, with the possibility of outsourcing (Young, 2003). Raymond, (2014) stated that the desire for companies to be cost effective in the face of cut throat competition from economies that have cheaper labour and other cheaper competencies has led to outsourcing on a very large scale. In recent years, there has been strong growth in the number of private sector businesses that are used to provide public services. For example, the running of prisons and social care homes might be out-sourced by central and local government to private sector providers often after a tendering or bidding process has been held (Anderson, 2011).

Recently, nearly half of companies in Europe and USA were considering outsourcing in their procurement plans though, outsourcing is complex and strategic, but executives need a breath of skills and a depth of knowledge to do it successfully (Goolsby, 2002 and Kathawala, Zhang and Shao, 2005). Strategic outsourcing has been proved as an instrument towards achieving substantial market growth in China, (Kang, Wu and Hung, 2006). Many operations in healthcare have been outsourced during the years. These services include payroll, billing, human resource, marketing, and so on. Other services that have been outsourced in many hospitals include cafeteria, dietary, laundry, and housekeeping (Karimi, Agharahimi and Yaghoubi, 2010). As hospitals look for ways to reduce costs around activities not core to the hospital's mission (e.g. laundry, food services, equipment servicing, transcription, document management, etc.) outsourcing is a valid strategy to consider for a financially healthier organization, (Advisory Board Company (ABC), 2015).

Interestingly, the Nigerian economy which is one of the most vibrant in Africa, provides a good condition for outsourcing, and it is playing a leading role in outsourcing particularly in any function as it concerns government interest. Currently, outsourcing partnerships are bringing significant benefits, including major cost savings, to industries with highly specific needs like the pharmaceutical industry. Government established the National Outsourcing Policy and Institutional Framework (NOPIF) in 2007 and also the guideline for public service reform of parastatals in 2006 for the country. Unfortunately, Federal Government owned hospitals have recorded poor performance in their policy formulation and implementation to the extent that most of the hospitals are now looking for possible ways of improvement. Recently, the Federal Government of Nigeria mandated all Federal Government owned hospitals and parastatals to outsource some of her services. Those services tipped to be outsourced include transport and carriage functions, radiological services, security services and catering services, etc. It claims that outsourcing of these services would lead to lower cost, high level productivity and efficiency which will in turn lead to higher performance (NOPIF 2007).

Against the above backdrop therefore, it is not empirically clear and established on the implications of outsourcing services on the performance of federal government hospitals in the South East, Nigeria notwithstanding that a lot of research has been carried out in other countries of the world such as in United Kingdom, United States of America, and China, which however, supports promoting hospital productivity in the developed countries. Thus, this is the research gap that this study seeks to fill by carrying out a study on outsourcing and performance of federal government owned hospitals in the South East geopolitical zone of Nigeria.

Statement of the Problem/ Justification

Performance level of Federal Government-owned Parastatals in Nigeria has been adjudged by many as below expectation which can be attributed to some certain factors. Evident among them is the high transaction cost, low-labour productivity and inefficiency. Prior studies (Adeola, 2005; Esogbue, 2005 and Bayo, 2012) have identified that the major causes of poor performance of the Federal Government-owned Parastatals in Nigeria are high transaction costs, low labour productivity and inefficiency. It is also evident from prior research that high cost of radiological services, poor performance of engaged security personnel and ineptitude behaviour of permanent employed drivers in the hospital seems to have been diverting the interest of the hospitals to non-core services thereby lowering the performance of hospitals in Nigeria (e.g. Esogbue, 2005 and Bayo, 2012).

Developed countries for instance have adopted the business method of outsourcing in discharging the non-core hospital services which is one of the business strategies confirmed by scholars to improve the performance of many corporate organizations. Nigerian Government in 2007 introduced the business strategy of outsourcing aimed at improving the parastatals performance and efficiency yet, it is not certain how outsourcing of radiological, security and transport & carriage services would improve performance of Federal Government-owned hospitals using South-East geopolitical zone as a study. Hence this study is therefore an attempt to ascertain the effect of outsourcing on performance of Federal Government owned hospitals in the South East geopolitical zone, Nigeria. This becomes much more pressing in the face of the global health challenges and the ravaging Covid-19 pandemic that the entire world (Nigeria inclusive) is trying to contain.

1.3 Objectives of the Study

Considering the global health system with the attendant current challenges and share determination of the Nigerian government in line with her policy trust, the aim of this proposed study shall be to empirically determine the influence of outsourcing on performance of Federal Government owned hospitals in the South East geopolitical zone of Nigeria. However, the specific objectives include:

1. To identify the degree of influence of outsourcing of radiological services on performance of Federal Government owned Hospitals in the South East geopolitical zone of Nigeria.
2. To determine the degree of influence of outsourcing of security services on performance of federal government owned hospitals in the South East geopolitical zone of Nigeria.
3. To identify the degree of influence of outsourcing of transport and carriage vehicles on performance of Federal Government owned hospitals in the South East geopolitical zone of Nigeria.

II. Literature Review

Outsourcing has been defined by scholars as the concept of hiring outside professional services which entails delegating non-core functions of the organization to other specialist and efficient services providers to meet the in-house needs of an organization or agency. In recent times many organizations are considering outsourcing most of their operations because it is becoming a visible option (Miekc, 2004). The rationale for outsourcing is simple and compelling in that contracting part of the operation is seen to be cheaper than the company doing all in-house. Outsourcing has become one of the healthcare sectors buzzwords. Outsourcing labour is linked to negative impact on occupational health and safety (OHS). In British, Columbia, Canada, provincial healthcare services providers outsource support services such as cleaners and food services workers to external contractors (Miekc, 2004). Healthcare workers are high risk grouped for occupational injuries. Outsourcing in healthcare is a cost-effective strategy that can lead to increase services quality (Saeed, 2010).

Extensive research has documented the occupational health and safety (OHS) risks of direct care positions such as Registered Nurses, Care Aides and licensed practical nurses. There are however, few epidemiological studies on cleaners and food service workers even though they provide key support services for the healthcare industry (Alammgir, 2008). Cleaners deal with hospital waste removal including garbage, blood and body fluids, human tissue and non-biological matters such as needles, wound dressing and packaging. Yassi, (2002) stated that despite numerous reports discussing the negative impacts of outsourcing on worker health, few rigorously designed studies have compared the impact of outsourcing on the same group of workers. Liu et al (2012) suggested that contracting-out is a political tool with potential of improving access, equity, quality and efficiency of healthcare. The outsourcing or contracting out in industrialized countries begun outside the healthcare sector, but it is now a well-developed model for health services providers. Saeed (2010) stated that other public hospitals are faced with many problems. Issues like less technical and allocation efficiency, failure in covering low-income and poor groups, and weak accountability to stakeholders are considered as most public hospital weakness performance. Outsourcing in healthcare seems ideal in the theory but there are some difficulties in implementation (Askan et al, (2000). Young (2008) stated that the benefit of outsourcing include increased staff manage, upgrading capital equipment, and improving services quality.

In a study of Liu et al, (2012) outsourcing in healthcare increases accessibility to services. Hsiao (2009) showed that most outsourced in non-medical items include medical waste and common trash (94%) gift store (75%) restaurant (56%), security guard (54%), medical instrument maintenance (37%) and in medical dems include goncesulance (51%), hem dislysis (50%), laser (25%) laboratory (13%), radiology (10%), health examination (10%), nutrition (2%). Complementing, Mayson and Fleshner, (2010) showed that 74% of Canadian urological believed that private health system reduces wait times and improve accessibility to care (73%). There are varied reasons why a business may choose to outsource a particular task, job or a process (Hazelwood et al 2005). Some of the benefits include improved focus on core business activities; free up business to focus on area of core competences; and increased efficiency. Outsourcing can also help the hospital business to be more flexible and respond to changes in the environment rapidly (Hazelwood et al 2005).

Reservations on Outsourcing

Chan (2008) affirmed that outsourcing involves handing over direct control over a business function or process for a third party. In line with certain risks are unavoidably associated with outsourcing. Problems associated with service delivery. This may fall below expectation or behind time (Alfonsi, 2013). When a particular task or function is outsourced by the hospital, confidentiality and security is at risk. There is always lack of flexibility as contract agreement could be too rigid to accommodate change. Most times outsourcing leads to redundancy, discontent among staff, loss of skill by staff and above all, may present additional hidden cost.

Sanders (2004) stated that outsourcing vendors strive to provide the non-care services that allows the hospital to focus on the business of serving patients. It is obvious that as an industry, the business of administrating hospitals has become very complex. Reimbursement from federal and state agencies has become difficult to manage and track. Regulatory requirements have become more complex; patient's expectations are becoming greater each year. Patients satisfaction is subjective when evaluating care provided but the judgment is the driver that when patients have a wide selection of health care providers (Otani et al, 2005). Therefore, it is very necessary to improve patient satisfaction levels, especially in today's competitive healthcare environment in which managed care companies use patient satisfaction as a tool in determining their reimbursement risks (Otani et al. 2005). Companies such as sodexo and Aramark in US have refined their outsourcing services for hospitals. In the food service business, outsourcing vendors can provide the food preparation and serving to patients, visitors, and staff. Innovative ideas, such as room service style dining, provide an opportunity for the patient to order a medical at their convenience (Sodexo, 2013). Again, the achievement of lofty objectives of outsourcing depends on trained and highly talented staff to avoid 'blame game'.

Best Practices for Outsourcing in Health Sector

Best practices are a set of quick loses, ethics or ideas set forth by required authority that represent the most efficient or prudent course of action (Alfonsi 2013, Churchill 2008). It is pertinent to understand that outsourcing involves the delegation of services and operations to others who have the expertise to perform the service more efficiently, cost effective and yet maintain the required acceptable standard (Alper 2004). In the United States and Europe, there are seven deadly sins of outsourcing and they include, outsourcing services that should stay within the organization; selecting the inappropriate outsourcing vendor for the job; writing a poor statement of work for the outsourcing service; allowing the outsourced service get out of control; benefit of the full cost of outsourcing; and failing to strategize an exist procedure for terminating the outsourcing contract (Barthelemy and Adist, 2013). However, organizational size, culture and values are the major factors in finding and selecting the right vendor. Sullivan (2009) stated that the outsourcing supporters argue that outsourcing of healthcare support services represent a viable strategy for meeting the challenges of improving healthcare delivery.

Implications of Outsourcing to Hospital Management

In outsourcing, the burden of fixed and variable costs are taken off from the corporation. The corporate image of the organization is enhanced since outsourcing focuses on cost reduction, replacing services that have underperformed within the organization. Healthcare organizations as well enjoy the above mentioned benefit. Michael (2004) stated that off-limit or out of reach hospital services are no longer an issue to outsourcing providers. Actually, there are numerous benefits to outsourcing services within a hospital setting. One of the outstanding benefits is the reduction in expenses for the outsourced services in regard to staffing and training (Buxbaum 2011). Another glaring benefit is that quality of the services provided increase and may result in increased customer satisfaction.

Unarguably, there are many significant aspects of outsourcing that seem very enticing to hospital senior leadership, there are just as many potentially negative aspects. There are ethical, legal and perhaps moral issues to consider when considering issue of outsourcing. Hazelwood et al (2005) affirmed that legal issues are very complex and diverse but some issues are important to understand when entering into outsourcing contract. Ethical issues can also arise from outsourcing, is there an ethical responsibility to inform the potent who his or her lab work or other service is provided by a contracted or outsourced third party? Issues like this should first 9-to the legal department for decision but it is commonly overlooked aspect in many organizations (Hazelwood et al 2003). Issues of moral are increasingly challenging to resolve. The question always is does the hospital have a qualified staff who monitors the contracted outsource vendor's contract performance. Foxx et al (2009) admitted that organization will see a dramatic change when the outsourcing vendor takes over but maintaining the lead of performance is often difficult.

Outsourcing Security Services in the Hospital

Outsourcing security services doesn't have to mean moving to the cloud. Enterprises have many options for outsourcing security services, including managed and hosted services (Mike 2013). Enterprises across a wide variety of industries are turning to cloud computing to reduce the burden on their IT support staff, decrease costs and provide services that would otherwise be superlative (Kotteeswari and Sharief, 2014). In the course of evaluating the best option for cloud sourcing attention is naturally turning to information security services due to the high cost of maintaining the hardware, software and staff required to provide these services on-site. Besides, the option of outsourcing security services are many and not without risk. Not every organization's solution to security outsourcing has to be found in the public cloud (Chan 2008).

Moreover, compliance requirements also drive organization to security outsourcing to help meet regulatory obligations. The most common scenario is the need for merchants that operate credit card processing system to comply with the payment cards industry data security standards. Chapple (2012) stated while any outsourcing project involves a degree of risk, these risks are exacerbated due to the official nature of security; leadership of the hospitals should answer these questions before venturing into outsourcing.

Outsourcing of Transport and Logistics in Health Sector

Significantly vehicle graveyards are all-too common sight in hospitals. These long-forgotten vehicles serve as reminders to the underlying obstacles faced by transport systems throughout Africa (Beale 2016). Routine maintenance required to keep cars, trucks and motorcycles moving simply does not happen, shortening the lifespan of the vehicle that are essential to delivering health commodities to the most remote communities (Beale 2016). Admittedly, these vehicle graveyards are a reminder of the weak return on investment for these expensive, short-lived machines. Against this back drop, many institutions are declining to fund the capital expenditure required to purchase vehicles, parts or storage facilities.

Obviously, lack of finance is just one of the contributing factors limiting the transport capacity of a health system. Hospital management, governments and donors alike are identifying new ways to improve health supply chain and the transport system they rely on. However, outsourcing transport and logistics can engender a lower cost of service, utilizing the core expertise of for-profit ventures. These hospitals must continually improve the quality of their service to attract and retain customers, and have incentives to perform efficiently and effectively and create new approaches to existing problems (Beale, 2016).

Relationship between Outsourcing and Operational Performance

According to a study carried out by Yanke Lovih partners (2003) showed that two-third of companies world-wide already outsource at least one business function to an external third party. According to Goldstein and Bacon (1999) this practice is common in U.S, Canada and Australia, where 75 percent of outsourcing is being sought. Outsourcing though a global trend has been in practice since late 1970s. One important thing is that outsourcing has grown beyond cost reduction but it also about reaping the benefits of strategic outsourcing such as having access to skilled expertise, flexible staffing and increasing efficiency and eventually generating enough profit.

Rimmer (1991) and Utley (1993) stated that outsourcing can free up assets and reduce costs in the immediate financial period and that organizations outsourcing part of the operations reports savings on operational and capital cost. Lau and Hurley (1997) find a significant relationship between outsourcing and profitability margin as they discovered that Chrysler's profit margin was four times as high as that of General Motors (GM) due to effective outsourcing through strategic alliance. Price Water House Coopers (1998) observed that outsourcing had moved remarkably from performing a single function more efficiently to reconfiguring or re-bundling whole processes in new ways to generate greater shareholder value across the enterprise.

Empirical Review

A reasonable number of empirical studies in the area of outsourcing have been conducted especially in the developed countries though, with diverse findings. For instance, Muweesi (2011), Musau (2016) and Kamanga and Ismail (2016) did studies on outsourcing and organizational performance that sought to establish relationships between outsourcing and performance of corporate entities. Using primary data, the studies unveil that cost driven outsourcing led to improve organizational performance by reducing cost and risks while increasing operational efficiency both in the short and long term. Recommendations has it that firms should adopt strategic and well thought out outsourcing partnerships in order to continuously reduce operational cost for growth, both in the short and long term.

Using survey research design, Adekunle, Adekule and Enebi (2017) considers the Nigerian job outsourcing in retrospect issues, challenges and way forward. Findings of the study indicate that outsourcing equally offers different incentives that can lead to firm competitive advantage and also an opportunity to engage

expertise in areas where existing internal staff is deficient. The study calls on the Nigeria national assembly to enact employment legislation law that will serve as a protection for employees against any form of maltreatment within their organization. Also evident is the studies of Guimaraes, (2011), Sanusi (2019) and Ikediashi and Aigbavboa (2019) that examine outsourcing as a strategy for facilities management provision in Nigerian Universities which adopted survey research design and the data collected was analysed using descriptive statistics and spearman's rank correlation. Findings shows that five facility management roles to which outsourcing has been most effective are campus security, cleaning services, plant operation and maintenance, waste management and laundry. The study recommends that universities should consider launching advocacy on the potential benefits of outsourcing to bolster the full acceptance of outsourcing.

Contributing, Adeleye (2011), Babin, Lahiri (2015), Bates and Sohal (2017) and Kavosi et al, (2018) examine impacts of outsourcing on business performance. Empirically, the study seeks to ascertain on how employers can better leverage outsourcing for strategic advantage, as well as mitigate key outsourcing risk. The study discovered that the four dimensions (tactical, operational, strategic and transformational) outsourcing presents business opportunities and risk for employers. Likewise, Agburu, Anza and Iyortsuun (2017) in their work examined the effect of outsourcing strategies on the performance of small and medium scale enterprises (SMEs), in Benue State Nigeria. The objective of the study was to investigate the effect of outsourcing strategies on the performance of small and medium scale enterprises (SMEs). The study used primary source of data from Benue State, Nigeria, which multiple regression technique was used to analysed it. The study discovered that outsourcing of back office activities, outsourcing of primary activities and outsourcing of supporting activities has a significant effect on organizational profitability of SMEs whereas, outsourcing of accounting activities has no significant effect on performance of SMEs. The study therefore recommended that SMEs should embark more on outsourcing strategies to attain the benefits of cost savings/restructuring which results in better customer service at profit.

From the above empirical studies, it is evident that there is gap in the literature with regards to this study (outsourcing and performance of federal government owned hospitals in Nigeria: a study of hospitals in the South East geopolitical zone) under consideration as no study to the best of knowledge of the researcher has done it with intension of achieving the above stated objectives. None has looked at outsourcing and performance in hospitals from the perspective of examining how outsourcing of radiological services and transportations services can affect productivity. This is a major research gap which this study seeks to fill.

Theoretical Framework

This study will be anchored on decision theory as propounded by Eric Leo Lehman in 1950 at Colombia University. Decision theory is concerned with identification of optimal decisions criterion that will have direct impact on productivity of firms. These optimum decision criteria could be to outsource where it is believed that such will increase productivity or to in source where it is believed that the use of people recruited on the system will pay off than using external source. Lehman argues that rational decision choice will affect productivity.

It assumes that goals and objectives are known and agreed upon, all alternatives are considered, all outcomes are taken into account, perfect information is freely available, decision makers are maximizers and decision makers are rational. Decision theory is a theory which provides a formal analytical framework for decision making under condition of uncertainty and risk. It is worthy to note that outsourcing and in-sourcing performances of function are sometimes uncertain to companies making such decision on which one will decrease cost and increase high labour productivity. It is in this regard that the researcher intends to adopt the decision theory as a theoretical framework.

III. Methodology

Ex-post facto research design will be adopted. The choice is predicated on the account that the independent variable(s) have already occurred and the study starts with the observation of the dependent variable(s). Thus, the independent variables were assessed in retrospect to their possible effect on the dependent variable(s). The study was conducted in Nigeria dwelling on outsourcing and performance of federal government owned hospitals in Nigeria with emphasis on hospitals in the south East geopolitical zone between 2005 and 2020. The choice of the area and period is the grey nature of both the country and period as no such study has been conducted in the country with emphasis on the research variables. Use was made of secondary data to be extracted from the annual audited report and accounts of Federal Teaching Hospital (FETHA), National Obstetrics Fistula Center (NOFIC) Abakaliki and University Teaching Hospital (UNTH) Enugu.

Model Specification

This study adopted the general multiple regression model as specified below:

$$Y = F(X_1, X_2, X_3 \dots X_n) \dots\dots\dots 1$$

To empirically evaluate the influence of outsourcing on performance of federal government owned hospitals in Nigeria with emphasis on hospitals in the south east geopolitical zone proxy by the variables, annual outsourcing cost of radiological services (AOCRS), annual outsourcing cost of security services (AOCSS), and annual outsourcing cost of transport and carriage services (AOCTCS) variables and aggregate waste reduction (AGWRE), the study hypothesized that performance of federal government owned hospitals depend behaviorally on the outsourcing. Thus, such behavioral effect can be given in the equation below:

$$AGWRE = f(AOCRS + AOCSS + AOCTCS) \dots\dots\dots 2$$

Econometrically, the model will be modified as stated below:

$$AGPERF = \beta_0 + \beta_1 AOCRS + \beta_2 AOCSS + \beta_3 AOCTCS + U_{it} \dots\dots\dots 3$$

Where, AGPERF = Performance of federal government owned hospitals in Nigeria (aggregate waste reduction)

AOCRS = annual outsourcing cost of radiological services

AOCSS = Annual outsourcing cost of security services

AOCTCS = annual outsourcing cost of transport and carriage services

β_0 = Intercept or average AGPERF when other variables are not applied.

β_1 = Coefficient of explanatory variable AOCRS

β_2 = Coefficient of explanatory variable AOCSS

β_3 = Coefficient of explanatory variable AOCTCS

U_{it} = the Gaussian white noise

However, to ensure reliability and check spuriousity of the results, the above model will be made to contain the following:

$$AGPERF = \beta_0 + \beta_1 AOCRS + \beta_2 AOCSS + \beta_3 AOCTCS + EXRATE_{it} + AINRATE_{it} + U_{it} \dots\dots\dots 4$$

Where, AGPERF = Performance of federal government owned hospitals in Nigeria (aggregate waste reduction)

AOCRS = annual outsourcing cost of radiological services

AOCSS = Annual outsourcing cost of security services

AOCTCS = annual outsourcing cost of transport and carriage services

EXRATE = exchange rate (control variable)

AINRATE = annual inflation rates (control variable)

β_0 = Intercept or average AGPERF when other variables are not applied.

β_1 = Coefficient of explanatory variable AOCRS

β_2 = Coefficient of explanatory variable AOCSS

β_3 = Coefficient of explanatory variable AOCTCS

U_{it} = the Gaussian white noise

Description of Research Variables

The dependant (Criterion) variable constitutes Performance of federal government owned hospitals proxy by the aggregate waste reduction in the South East geopolitical of Nigeria, while outsourcing represents the independent (predictor) variable proxy by annual outsourcing cost of radiological services, annual outsourcing cost of security services and annual outsourcing cost of transport and carriage services. The data gathered was estimated using regression technique, with the aid of E-view 9.0 econometric software thereby conducting various statistical tests to ascertain the overall significance and behavior of the variables in the study equation.

IV. Results

Descriptive results

Table 1: The Extent of Outsourcing of Radiological Services in FETHA, NOFIC and UNTH

S/N		MIN	MAX	MEAN	Sdv
1	Forces of demand and supply determine the cost of outsourcing services of radiological services	1	5	3.1565	1.41276
2	Outsourcing services of radiological services are done only when the need arises in line with the organizational policies	1	5	3.5479	1.12699
3	The organization which engages in outsourcing does not pay for idle hour	1	5	3.7376	.94601
4	Outsourcing services save the cost of allowances to staff on leave or official trip who provides radiological services	1	5	3.4895	1.24395
5	Outsourcing services save the cost of gratuity and pension to staff who provides the radiological services	1	5	3.2552	1.34773
6	Outsourcing of radiological services save cost of wastages since the services are provided by professionals	1	5	3.1042	1.48991

Source: Survey analysis 2021

The result in Table 1 above suggests that the respondents agree that forces of demand and supply determine the cost of outsourcing services of radiological services; outsourcing services of radiological services are done only when the need arises in line with the organizational policies; the organization which engages in outsourcing does not pay for idle hour; outsourcing services save the cost of allowances to staff on leave or official trip who provides radiological services; outsourcing services save the cost of gratuity and pension to staff who provides the radiological services; outsourcing of radiological services save cost of wastages since the service are provided by professionals with weight mean value of 3.1565, 3.5479, 3.7376, 3.4895, 3.2552 and 3.1042 respectively. Given the moderate standard deviation of 1.41276, 1.12699, 0.94601, 1.24395, 1.34773 and 1.48991 respectively, it indicated that the responses of the respondents did not vary greatly on the assertion that forces of demand and supply determine the cost of outsourcing services of radiological services; outsourcing services of radiological services are done only when the need arises in line with the organizational policies; the organization which engages in outsourcing does not pay for idle hour; outsourcing services save cost of allowance to staff on leave or official trip who provide radiological services; outsourcing services save the cost of gratuity and pension to staff who provide the radiological services; outsourcing of radiological services save cost of wastages since the services are provided by professionals.

Table 2: The extent of outsourcing of security services in FETHA, NOFIC and UNTH

		MIN	MAX	MEAN	SDv
7	Outsourcing has helped your organization to focus more on core functions without being distracted on how to provide security to the organization	1	5	3.2621	1.30182
8	Staffing level in your organization is at its best since the introduction of outsourcing	1	5	3.2671	1.19361
9	Outsourcing has improved staff commitment to work in your organization	1	5	3.3904	1.29919
10	High job-co-ordination has been achieved since the introduction of outsourcing in your organization	1	5	3.4438	1.32108
11	Outsourcing has resulted to higher labour productivity in your organization	1	5	2.9231	1.17796
12	Outsourcing has improved the quality of services rendered in your organization	1	5	3.0323	1.31139
13	Outsourcing has resulted to loss of inbuilt skills in the outsourced services of your organization	1	5	2.9560	1.11574

Source: Survey analysis 2021

The result in Table 2 above suggests that the respondent agree that outsourcing has helped organization to focus more on core functions without being distracted on how to provide security to the organization, whether staffing level in organization is at its best since the introduction of outsourcing; outsourcing has improved staff commitment to work in the organizations;, high job co-ordination has been achieved since the introduction of outsourcing in the organizations; outsourcing has resulted to higher labour productivity in the organizations, outsourcing has improved the quality of services rendered in the organizations; outsourcing has resulted to loss of inbuilt skills in the outsourced services of the organization with weighted mean value of 3.2621, 3.2671, 3.3904, 3.4438, 2.9231, 3.0323 and 2.9560 respectively. Given the moderate standard deviation of 1.30182, 1.19361, 1.29919, 1.321108, 1.17796, 1.31139 and 1.11374 respectively, it showed that the responses of the respondents did not vary greatly on the assertion that outsourcing has helped your organization to focus more on core functions without being distracted on how to provide security to the organization, staffing level in the organizations is at its best since the introduction of outsourcing; outsourcing has improved staff commitment to work in the organizations, high job co-ordination has been achieved since introduction of outsourcing in the organization; outsourcing has resulted to higher labour productivity in your organization; outsourcing has improved the quality of services rendered in the organizations; and outsourcing has resulted to loss of inbuilt skills in the outsourced services of the organizations.

Table 3: The extent of outsourcing transport and carriage services in FETHA, NOFIC and UNTH

		Min	Max	Mean	Stdev
14	Outsourcing has helped your organization to have access to external skills and knowledge	1	5	3.000	1.24838
15	Outsourcing has increased capacity building in your organization	1	5	3.0314	1.26000
16	Outsourcing paves way for engagement of qualified transport and carriage service providers which save cost of maintenance and repairs	1	5	3.2756	1.25762
17	Outsourcing removes bureaucracy and enhances timely delivery of transport and carriage services in hospitals' operation	1	5	3.0288	1.30741

Source: Survey analysis 2021

The result in Table 3 above suggested that the respondent agree that outsourcing has helped organization to have access to external skills and knowledge; outsourcing has increased capacity building in the organization; outsourcing paves way to engagement of qualified transport and carriage service providers which save cost of maintenance and repairs; outsourcing removes bureaucracy and enhances timely delivery of transport and carriage services in hospital’s operation with weighted mean value of 3.0000, 3.0314, 3.2756 and 3.0288 respectively. Given the moderate standard deviation of 1.24838, 1.26000, 1.25762 and 1.30741 respectively, it depicted that the responses of the respondents do not vary greatly on the assertion that outsourcing has helped organizations to have access to external skills and knowledge; outsourcing has increased capacity building in the organizations; outsourcing paves way for engagement of qualified transport and carriage service providers which save cost of maintenance and repairs and outsourcing removes bureaucracy and enhances timely delivery of transport and carriage services in hospital’s operation.

Table 4: the performance of FETHA, NOFIC and UNTH

S/N		Min	Max	Mean	Stdev
18	Outsourcing has helped in reduction of cost of services and function in your organization	1	5	2.9007	1.21482
19	Outsourcing saves avoidable costs in the organization as services are contracted to outsiders	1	5	2.9071	1.16324
20	Outsourcing has increased the efficiency and effectiveness of services in your organization	1	5	3.0719	1.30017
21	Outsourcing has improved both financial and non-financial productivity in your organization	1	5	3.4438	1.32108

Source: Survey analysis 2021

The result in Table 4 above suggested that the respondent agree that outsourcing has helped in reduction of cost of services and function in the organizations; outsourcing saves avoidable costs in the organization as services are contracted to outsiders; outsourcing has increased the efficiency and effectiveness of services in organizations and outsourcing has improved both financial and non financial productivity in the organizations with weighted mean value of 2.9007, 2.9071, 3.0719 and 3.4138 respectively. Given the moderate standard deviation of 1.21482, 1.16324, 1.30017 and 1.32108 respectively, it showed that the responses of the respondents do not vary greatly on the assertion that outsourcing has helped in reduction of cost of services and function in the organizations; outsourcing saves avoidable costs in the organization as services are contracted to outsiders; outsourcing has increased the efficiency and effectiveness of services in the organizations and outsourcing has improved both financial and non-financial productivity in the organizations.

Analysis of Results

Table 5: Model Summary

Mode	R Square	Adjusted R Square	Std. Error of the estimate	Change Statistics		
				R Square Change	Sig. F Change	Durbin Watson
1	.702	.694	2.34013	.702	.000	1.914

- a. Predictors (constant) TACS, RADS, SEC
- b. Dependent Variable PERF.

The table above is a model summary which shows the fitness module. Critical examination of the model shows that the entire model is significant. This is confirmed by the sig. F change of .000. The R² of .702 shows that 70% of the total variation in the dependent variable (PERF) is accounted for by the explanatory variable namely radiological services (RADS), Security Services (SECS) and Transport and carriage function (TACS) while 30% of the total variation in the dependent variable is attributable to the influence of other factors not included in the regression model. Durbin Waston statistics (DW): The DW is 1.914. At 5% level of significance with three explanatory variable and 20 observations, the tabulated DW for dL and du are 0.702 and 0.694 respectively. The tabulated DW is greater than the lower limit. Therefore, the module is fit since it is above 1.5 and below 2.0.

Table 6: ANOVA analysis result

Model	Sum of Square	DF	Mean Square	F	sig
Regression	1370.440	3	458.813	83.418	.000
Resided	580.497	108	5.478		
Total	1950.918	109			

Dependent variable: PERF

a. Predictor (constant) TACS, RADS, SECS

The chosen level of significance is greater than the P-value, the null hypothesis is rejected. Otherwise, we accept null hypothesis, it is found in the table above that $\alpha=0.05$ is greater than the P-value of the calculated value 0.0000 of TACS, RADS and SECS. Thus, H_0 is rejected and we conclude that there is significant relationship between TACS, RAD, RECS and performance.

Table 7: Regression Estimate/Outcome

Model	UnstandardizCoefficients		StandardizeCoefficient			Correlations			Collinearity Statistics	
	B	Std. Error	Beta	T	Sig	Zero-order	Partial	Part	Tolerance	VIF
RADS	-.012	-.061	-.013	-.196	.845	.386	-.019	-.010	.673	1.486
SECS	.288	.057	.426	5.049	.000	.758	.440	.268	.394	2.537
TACS	.572	.086	.492	6.684	.000	.781	.545	.354	.518	1.929

Source: Survey analysis 2021

RADS is showing 0.845 and it means that it is not significant. The null hypothesis will be accepted while we reject the alternative hypothesis. It is therefore means that radiological service outsourcing in FETHA, NOFIC and UNTH does not encourage performance.

SECS from the table above is showing 0.000 which means that the null hypothesis will be rejected while we accept the alternative. Therefore, it is significant. It means that security services outsourcing in FETHA, NOFIC and UNTH encourages performance. TAC from the table above is showing 0.000 meaning that it is significant. The null hypothesis will be rejected while we accept the alternative. What this means is that transport and carriage functions in Federal Government owned hospitals encourages performance.

Test of Hypothesis

In testing the hypotheses (first, second and third) of the study, use was made of the null hypotheses as stated below:

Step 1 Restatement of the null Research Hypothesis

H_{01} : Outsourcing of radiological services does not significantly affect the performance of Federal Government owned Hospitals in South Eastern Nigeria.

Step 2 Decision Rules

Decision Rule 1: Accept the alternate hypothesis and reject the null hypothesis if the P-value is less than the chosen level of significance (0.05). It implies that the estimated variable has significant effect on the dependent variable.

Decision Rule 2: Uphold the null hypothesis and reject the alternate hypothesis if the P-value is greater than the chosen level of significance (0.05). It implies that the estimated variable has insignificant impact on the dependent variable.

Step 3: Decision

Based on the regression result presented in table 7 above, the estimated function shows that the chosen level of significance (0.05 is less than the P-value of + - calculated (0.845) of radiological services. Since 5% (0.05) level of significance is less than the P-value [0.8450], we upheld the null hypothesis and conclude that the outsourcing of radiological services does not significantly affect the performance of Federal Government owned Hospitals in South Eastern Nigeria.

H_{02} : Outsourcing of security services does not significantly affect the performance of Federal Government owned Hospitals in South Eastern Nigeria.

Based on the regression result presented in table 7 above, the estimated function shows that the chosen level of significance (0.05 is greater than the P-value of + - calculated (0.000) of security services. Since 5% (0.05) level of significance is greater than the P-value [0.000], we accepted the alternate hypothesis and reject the null hypothesis which suggested that outsourcing of security services does not significantly affect the performance of Federal Government owned Hospitals in South Eastern Nigeria. Thus, the study concludes that outsourcing of security services significantly affect the performance of Federal Government owned Hospitals in South Eastern Nigeria

H_{03} : Outsourcing of transport and carriage vehicles does not significantly affect performance of Federal Government owned Hospitals in South Eastern Nigeria.

Based on the regression result presented in table 7 above, the estimated function shows that the chosen level of significance (0.05 is greater than the P-value of + - calculated (0.000) of transport and carriage vehicles. Since 5% (0.05) level of significance is greater than the P-value [0.000], we accepted the alternate hypothesis and reject the null hypothesis which suggested that outsourcing of transport and carriage vehicles does not significantly affect the performance of Federal Government owned Hospitals in South Eastern Nigeria. Thus, the study concludes that outsourcing of transport and carriage vehicles significantly affect the performance of Federal Government owned Hospitals in South Eastern Nigeria.

V. Conclusion

The study concluded that outsourcing leads to improvement in the performance of FETHA, NOFIC and UNTH. Precisely, the improvement in performance was up to different levels among the diverse performance metrics. The most critical factors were improvement in quality of products, concentration on core competences, increase in customer satisfaction, shorter lead times, services provision in affordable costs, reliability of services offered, technological advancement, cost reduction in new products development, timely delivery of services and decrease in operating costs.

VI. Recommendations

Having stated the summary of findings of the study and in furtherance reached a conclusion, the study therefore recommends:

1. There must be mutual understanding between the outsourced organization and the buyer of the services. FETHA, NOFIC and UNTH should desist from outsourcing radiological services as its benefits have been very minimal.
2. To achieve targeted performance, the top management must be involved to give support to issues relating to outsourcing thereby playing active role in deciding the non-core services to be outsourced so that gains arising from outsourcing of security services will be realized.
3. Likewise, to enhance performance, Nigeria government and top management must evolve rules and regulations supporting outsourcing so that gains arising from outsourcing of transport and vehicle services will be realized.

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