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Supply Chain Management in Real Estate Practices: The Estate Surveyor and Valuers' Perspective

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Abstract

Real estate practice is a strategic and multi-faceted vocation that connects the clients/owners of real estate projects or products with end users in the building industry. Different aspects of real estate practices require collaboration of real estate practitioners who are professional estate surveyors and valuers, with the built environment professionals and other stakeholders at different levels in order to achieve the transaction objectives. This study, therefore, examined the practice with a view to uncovering the preparedness of the estate surveyors and valuers with respect to the knowledge and application of supply chain management in real estate practices. Empirical data were collected with the aide of questionnaires administered to respondents from the 373 estate firms in Lagos State, Nigeria of which 291 were duly completed and returned constituting 78% rate of response. The Readiness Assessment Model was adapted to determine the operational preparedness of the estate surveying and valuation firms to implement supply chain management with regards to management readiness, employee readiness, services/processes readiness and logistic/ICT readiness on a 5-point Likert scale and the corresponding mean score and relative importance was determined. The Kolmogorov Smirnov Test of Normality was performed and showed that the data was normally distributed. Hence, the Pearson Product Moment Correlation analysis was used to determine the relationship between knowledge and application of supply chain management in real estate businesses. It was observed, among others, that the knowledge of supply chain management is generally low among estate valuers and does not necessarily translate to application in the property market transactions of real estate firms. The study further observed that management and employees of estate surveying and valuation firms do not have adequate knowledge of the principles and practices of supply chain management for productive engagement in property market transactions. This was further identified alongside others such as confidentiality, stiff rivalry and economic instability as critical factors resisting the adoption of supply chain management in the property market. The study therefore suggested capacity building programmes on supply chain management for the estate surveyors and valuers to improve the knowledge of the strategy and harness the benefits.

Keywords: Supply chain, estate valuers, management, firms, building

1.0 INTRODUCTION

Globalization of industry practices and trade have had tremendous effect on the efficiency, productivity and profitability of firms across economic sectors in the past few decades. As technology advances and consumers' demand, taste and sophistication increase, organizations also change approach either by developing new strategies, adopt and adapt innovations that strengthen performances in other industries and economic sectors. One of such is the supply chain management which has evolved over time. Crandall et al. (2015) averred that the early supply chain involved a discrete and disconnected series of steps through which products moved from the stage of production to the point of consumption. However, as businesses spread into the global markets, the sources of supply also widens, culminating in a longer and more complex chains of suppliers. Consequently, the market no longer remains discrete, disconnected or disorganized because of the opportunity to engage with multiple suppliers in the global market on the platform of electronics and information and communication technology. Supply chain management which has its transformational origin in the manufacturing industry has subsequently been adopted in other economic sectors to strengthen operational performance. The concept, according to Wisner et al. (2011), was initially introduced in the manufacturing industry to regulate business processes in a distinct and logical manner that improve quality, safe time and increase profit. However, in the last two decades according to O'Brien et al. (2008), the strategy has garnered attention and accolades among organizations in the manufacturing industries that regards it as a new way of doing business. Contrary to the earlier perspective as a form of discrete and disconnected steps, supply chain management has emerged a collaborative strategy that conveys services and products from producer through the middlemen to the ultimate user (Crandall et al., 2015).

Supply chain, in its simplest term, depicts the collaboration among clients, consultants, contractors, subcontractors and consumers to effectively convey products and services, information and funds to appropriate destinations in an industry (Akintoye et al., 2000; Barratt,

2004). Virtually all industry transaction and relations, deal with the exchange of products and services through intermediaries. The sequence of tasks and activities executed in a collective manner by relevant parties to move products and services from producer to consumer is referred to as the supply chain management. Thus, in order to remain relevant, competitive and attain financial success in the 21st century, companies have engaged supply chain practices to improve internal operations efficiency and external collaborations effectiveness. Van der Vorst (2004) concluded that supply chain management has become part of senior management agenda in the 21st century. The study further averred that executives are becoming aware that the successful coordination, integration and management of key business processes across members of the supply chain determine the ultimate success of the enterprise. Christopher (2016) described it as a network of organizations working together to control, manage and improve the flow of materials and information from suppliers to users. The goal of putting in place an efficient supply chain is to help generate revenues throughout the value chain (Porter, 1996). Therefore, engaging supply chain practices require that the firm identify its areas of core competence and focus on setting up structure that enables it to optimize the strategy and earn the desired level of competitive advantage. Crandall et al. (2015) concluded that maintaining constant flow of products, information and funds requires a number of facilitating activities and also depends on firm's infrastructure, technology development, financial, accounting, human resource and procurement management. This implies that optimizing supply chain practices by any organization is dependent on certain factors hinged on organization structure, infrastructure and preparedness.

Despite the gains that firms stand to benefit from the adoption of supply chain management, studies have revealed that the strategy is still at low levels of adoption especially among firms in developing economies. For instance, the Nigerian construction industry faces daunting challenges in a bid to incorporate supply chain practices and as a result, organizations in the industry find it difficult to effectively implement the strategy to the benefit of the industry at large. Amade et al. (2016) identified some of the challenges in the industry as poor understanding of the concept, uncertain advantages to the organization and lack of trust in the industry. Generally, the adoption of supply chain practices in the Nigeria business environment has been seriously constrained by poor infrastructure, endemic corruption and insecurity (Abah & Adamu, 2017). In addition, Aje et al. (2015) observed that inadequate knowledge and lack of awareness of the concept is a major factor responsible for the low level of adoption among quantity surveying professionals. Abah and Adamu (2017) therefore concluded that inadequate knowledge, lack of awareness and poor preparedness are vital issues that hinder effective engagement of supply chain management among many organizations in the Nigerian construction industry. Just as activities in the construction industry are highly fragmented, so also are the roles and responsibilities of professionals involved in executing construction projects. Estate surveyors and valuers are among the construction industry professionals that render services at different stages of property development process. Various functions of professional estate surveyors and valuers include property management, property development, property rating, valuation, feasibility and viability assessment, property leases and sales, facilities management, project management, auctioneering, portfolio management (Ifediora, 2009; Kuye, 2008; Oloke et al., 2013). However, little or nothing is known about the level of knowledge, preparedness and adoption of supply chain practices in the real estate surveying and valuation profession. This study therefore examines the perspectives of estate surveyors and valuers about supply chain management as well as their preparedness and adoption of the principle to improve industry relation and operational efficiency.

2.0 LITERATURE REVIEW

2.1 Property Market Transaction

The building industry comprises a huge sector of economy where different intermediate professionals, contractors and services providers are involved in the creation, transaction and exchange of real estate products and services. The delivery of any product or service in the property market follows a complex and fragmented pattern commonly referred to as the development process. Graaskamp (1981) described the process as a continuum of construction technology, financing, marketing, administrative controls and rehabilitation required to operate the real estate enterprise over many years. The development process is a complex procedure that involves the input of multiple stakeholders from diverse segments of the building industry markets. Investment in property development is not only capital intensive and time consuming but also full of risk. As a result, supply chain management has emerged an innovative strategy to manage the processes and transactions in the property market. Osuizugbo and Ojelabi (2020) revealed that communication and coordination among parties and stakeholders is one of the vital factors influencing building production management in the industry. Property development covers a broad range of value creating and value adding activities such renovation, refurbishment, repair, conversion or redevelopment of existing but impaired structure or wholesome new development. Such transformation takes place at the instance of the client with inputs from professionals, financiers, contractors, subcontractors and eventually delivered to the users. The successful execution of the transformation therefore has to do with the ability of the participants to play their role in an effective and reliable manner. Development proceeds from inception and planning stages where majority of the professionals partake to feasibility stage where compliance, quality and reliability of design with environmental requirements as well as the financial viability are ascertained. Prospective contractors and builders are invited and selected through the process of tendering and contracting at the commitment stage and thereafter mobilized to execute the contract at the implementation/execution phase. To ensure good control and expedite the process, contracts may be divided into lots and given out to subcontractors although this increases the chain of participants. Upon completion, the project enters the next phase which is management and disposal where the management firm makes it available to the user and takes up the maintenance. Thus, the entire network of participants interacts throughout the process as buyers and sellers of service cum product or the other. The estate valuers render various services in the construction and property market such as property valuation, investment appraisals, property management, facilities management, project management, leases and sales (agency), property marketing, housing procurement, land development, feasibility and viability studies, auctioneering, and portfolio management. These involve collaboration of relevant parties and professionals, and the

contribution facilitated and coordinated by the estate valuer. Thus, the estate valuers work in collaboration with other stakeholders in construction industry and property market to provide satisfactory services for the client and the ultimate users of real estate products.

2.2 Supply Chain Management Culture

In order to simplify the knowledge and application of supply chain management, it is important for organization to have better understanding of the principles underlying the practice. According to Cox (1999), supply chain management is a way of thinking that is devoted to discovering tools and techniques that improve operational effectiveness and efficiency throughout the delivery channels. Supply chain, though relatively new, emerged with the primary purpose of integrating individual organization goals and activities with others to optimize the results of the network. To design supply chain for any organization, three key areas of decision are paramount. These according to Lambert and Cooper (2000) are:

a) Who are the key supply chain members with whom to link processes?
b) What processes should be linked with each of these key supply chain members?
c) What level of integration and management should be applied for each process link?

These decision areas require that an organization ascertain the areas of core competence, including the raw materials, products, services and consumers; identify the organizations relevant to the production line, recognize the processes appropriate for linkage to the relevant organizations and determine the level and extent of integration applicable for each process. Ojo et al. (2014) identified three layers of decision integration in construction supply chain management. These are:

(i) The primary supply chain which delivers materials needed for the construction
(ii) The support chain which provides equipment to facilitate the construction
(iii) The human resources supply chain that ensure steady supply of labour

Despite the different definitions, scope and design of SCM strategy, the principles of the concept remain fundamental and applicable regardless of the clime and industry terrain. Elliot (2012) identified seven fundamental principles of supply chain management. These include:

- Segment customers based on service needs
- Customize logistics network
- Drive operations from demand
- Differentiate products closer to the customer
- Source strategically
- Develop a supply chain-wide technology strategy
- Use supply chain spanning performance measures

These principles have been used by organizations to navigate through the preliminaries of setting up a customized structure for effective and efficient supply chain management strategy design and deployment. Emuze and Smallwood (2013) opined that the client or contractor can champion the implementation of supply chain management in construction. However, due to the fragmentation of construction and property market activities, it is expedient that participating organizations incorporate the practices in their respective operation to improve the operational efficiency and output of the entire network. Different areas of application of SCM in the construction industry according to Peter et al. (2020) include procurement, customer relationship, logistics, performance evaluation, models application, information, environmental management and sustainability.

2.3 ICT Roles in Supply Chain Management

Technological advancement particularly in the areas of transportation infrastructure, information and communication technology has had tremendous impact on the manner and speed of transformation sweeping across various industries in the last few decades. The ICT and logistics infrastructure have both emerged as vital organs of supply chain management and other industry innovations. The use of electronic hardware and software with internet technology has dramatically improved industry relations. Nowadays, a broad range of electronic devices and internet facilities are being used to facilitate industry transaction. The use of ICT according to Bharadwaj (2000) makes transaction processes more transparent to the stakeholders and often lead to the adoption of better business practices to meet custmer's needs. Apiyo and Kiarie (2018) averred that every organization desires to engage ICT to facilitate the production process, marketing, supply chain integration and customer feedback. In the same vein, Amukanga and Otuya (2021) stated that to reduce costs in SCM activities and offer real-time customer service levels, companies use computers and other several ICT equipment and machinery. Amongst the benefits of ICT application in SCM processes are instant processing of information, improvised customer service, limited paperwork, high productivity, advanced tracing and expediting, cost efficiency, competitive benefit, advanced billing, smart recording and storage. Furthermore, the scanning and tracking device, internal and external database management and other enterprise resource planning tools have facilitated the evolution and integration of supply chain management applications in organizations across the world. The combination of ICT and transportation infrastructure has helped to overcome numerous barriers associated with convectional business practices to achieve operational efficiency in the business world.

2.4 Readiness Assessment Model

The Readiness Assessment Model has been a tool used for determining the level of preparedness of an expert, a firm, an industry or economic sector to adopt certain innovative solution into the practice or production process. It had been found useful and adopted or adapted in various economic operations across different sectors and organizations. Readiness implies the extent to which an economy is prepared, willing and able to engage and benefit from innovative solutions to economic practices and production processes. Organizations at times are reluctant or unable to engage an invention or new strategy due to several reasons ranging from lack of understanding, organization culture to insufficient capital. Different version of readiness model have been developed for different industry practices and are often adapted to suit the need in other areas as well. For instance, the Readiness Assessment for Concurrent Engineering (RACE) which was developed for use in Software Engineering and automotive electronic industries (Ruikar et al., 2006) has also been adapted for use in the construction industry (Khalfan & Anumba, 2000). This study adopted the VERDICT (Verify End-User e-Readiness using Diagnostic Tool) model which is used to evaluate the level of preparedness of construction companies and sections and subsections within an organization (Aziz & Salleh, 2011). This tool was also engaged by Abah and Adamu (2017) to evaluate the preparedness of construction industries in Nigeria for the adoption of supply chain management practices to improve output of the sector. The VERDICT readiness model emphasize the relevance of people (employee), process (project/operation), technology (ICT, facilities, logistics, infrastructure, strategy) as well as the management (leader, entrepreneur and chief executives) and consider their readiness very crucial to the adoption and successful deployment of any innovation or new strategy in an organization.

3.0 METHODOLOGY

The survey research approach was adopted and the 373 firms of estate surveying and valuation in Lagos State constituted the study population. The sample was elicited from the directory of the Nigerian Institution of Estate Surveyors and Valuers (NIESV). In order to obtain widest possible responses on the subject matter, the entire study population was adopted as the sample size. The main instrument of data collection was questionnaire. One questionnaire each was administered to one employee of the firm in the capacity of principal partner, manager or head of department. This category of respondents was selected for questionnaire administration because they are deemed to have had sufficient years of work experience with the firm and understand the operational procedure/approach of the firm. Reliability test was conducted to measure the internal consistency of questions raised in the questionnaire by calculating the Cronbach's alpha. Thirty-two items having responses measured on 5-Point Likert Scale and a total of 291 responses were involved. The computed Cronbach's alpha was 0.863 which is greater than the baseline score of 0.7. The Cronbach's alpha showed a good level of internal consistency of questions as well as the scales of measure of responses. Non-probability (expert) sampling technique was engaged in reaching out to the respondents. Singh (2007) explained that the use of expert sampling involves assembling of persons with demonstrable experience and expertise in the area of interest. Only 291 respondents returned the questionnaire duly completed, constituting a response rate of 78%. The viewpoints of estate valuers as regards the operational readiness of real estate firms to engage supply chain were obtained with regards to management readiness, employee/staff readiness, services/processes readiness and logistic/ICT readiness. Data collected were analysed with basic descriptive tools of percentage, frequency and then presented in charts and tables. Variables of the preparedness were measured on a 5-Point Likert scale and corresponding mean score and relative importance determined. Data were subjected to Kolmogorov Smirnov Test of Normality which yielded a p-value of 0.211 (*p-value >0.05*) is statistically insignificant, thus, implying that the data were normally distributed. Hence, Pearson Product Moment Correlation was used to determine the relationship between knowledge of supply chain management and its application in real estate services.

4.0 DATA ANALYSIS

4.1 Response Analysis

A set of questionnaire was administered to principal officers of the 373 estate firms across Lagos state. The total number of questionnaires administered and retrieved is as presented in Table 1.

Table 1 Analysis of response

Questionnaire	Frequency	Percentage
Total No. Administered	373	100%
Total No. Retrieved	310	83.1%
No. duly completed	291	78.0%
No. not returned	63	16.9%
Effective rate of response	291	78.0%

As shown in Table 1, a total of 310 questionnaires were returned with only 291 duly completed and useful for subsequent analysis. The effective rate of response achieved was therefore 78% and since this is sufficiently above average of the total number of respondents, the response rate was deemed satisfactory for further analysis. Moser and Kalton (1971) asserted that the outcome of an investigation is regarded as biased and of little or no relevance if the response rate is less than 30-40%.

4.2 Scope of Real Estate Services

The scope of services offered by the estate surveying and valuation firms involved in this survey was analysed and presented in Table 2. The result showed that only two aspects of real estate services, i.e. agency and property management are common to all the firms in study area while less than 50% offer auctioneering, property development and portfolio management services respectively. The few number of estate firms providing the three services is not unconnected with the level of technicalities, risk and huge capital required for development projects. However, it was observed that more than 50% provide services in other aspects of the practices.

Table 2 Scope of services in real estate firms

Scope of real estate operations	No. of firms	Percentage
Property management	291	100%
Project management	172	59.1%
Auctioneering	87	29.9%
Facilities management	165	56.7%
Property development	113	38.8%
Feasibility and viability study	146	50.2%
Valuation (Plant & Machineries)	218	74.9%
Valuation (Land & Buildings)	270	92.8%
Agency (sales & leases)	291	100%
Portfolio management	139	47.8%
Property rating	263	90.3%

4.3 Preparedness of Estate Firms for Supply Chain Management

The adoption of supply chain management in estate firm's operations has to do with the preparedness of management, employee, service/process and ICT/Logistic infrastructure in the firm. The mean score derived from the 5-Point Likert scale was interpreted using the cut-off points outlined by David and Sutton (2004) and Morenikeji (2006).

- 1 – 1.49 (Strongly Disagree)
- 1.50 – 2.49 (Disagree)
- 2.50 – 3.49 (Undecided)
- 3.50 – 4.49 (Agree)
- 4.50 – 5.0 (Strongly Agree)

Table 3 Preparedness of estate firms for supply chain implementation

Readiness variables	Total	Mean score	RII
Management readiness			
Management is aware of SCM	937	3.220	0.644
Management has in place a well-crafted SCM plan/policy for firm operations	796	2.735	0.547
The SCM plan is communicated to all members of staff	737	2.533	0.507
Management makes provision for capacity building in SCM	768	2.639	0.528
Employee's readiness			
The firm's structure is flexible enough to adopt SCM	1045	3.591	0.718
The firm has capable hands to implement SCM plan	1043	3.584	0.717
Employees understand the principles and practice of SCM	714	2.454	0.491
Members of management and staff in the firm undergo training on SCM	788	2.708	0.542
Service/Process readiness			
All aspects of real estate firm services require elaborate SCM plan	870	2.990	0.598
SCM in real estate firm services is more of material (primary) chain integration	1028	3.533	0.707
SCM in real estate firm services is more of support chain integration	1037	3.562	0.712

SCM in real estate firm operations is more of labour chain integration	1042	3.580	0.716
ICT/Logistics infrastructure readiness			
The firm has ICT/logistic infrastructure that support SCM plan	681	2.340	0.468
The firm has arrangement for logistics that support SCM adoption	940	3.232	0.646
The firm engages competent hands to handle the ICT/logistics facilities	996	3.421	0.684
The firm is buoyant enough to upgrade its infrastructure for SCM adoption	1109	3.811	0.762

Assessing the readiness of the management, the mean scores of the variables are below 3.49 which showed that respondents generally disagree and undecided about the readiness of the management of estate firms to adopt supply chain management. However, majority of the respondents agreed that management of many of the firms makes provision for continuous training on emerging market practices and innovations such as the supply chain management. The results further showed that respondents disagreed with the statements that estate firms have well-crafted SCM policy which is communicated to the employees. It was also observed that respondents are skeptical about the level of awareness of SCM in the firm, especially among the management of the firms. With regards to employee's readiness, the analysis indicates that most employees have neither been trained on supply chain management nor have requisite knowledge and understanding of the principles and practices of SCM. The mean score of 2.454 showed that respondents generally disagreed with the statement that employees understand the principle and practice of SCM. However, responses did show that the firm's structure is flexible enough to adopt SCM and employee base that could be cultivated on the application of SCM.

Regarding the preparedness and applicability of SCM in the operations of the estate firms, that is the readiness of estate firms' services to engage supply change management practices, results showed that respondents are of different opinion. While respondents were undecided about how comprehensive the SCM plan for real estate transactions should be, analysis did show that some opined that SCM plan is more of material chain integration while some were of the opinion that it has to do with support chain integration while others viewed it as more of labour chain integration. This further alluded to the multi-faceted nature of the jobs of estate surveyors and valuers in the real estate market. Finally, the ICT cum logistics readiness of the firms were examined to provide necessary support for supply chain management strategy of real estate firms. The mean score of the variables assessed showed that estate firms are not yet equipped with relevant ICT/logistics facilities that can support SCM adoption, although the firms are buoyant enough to upgrade the ICT/logistics for effective deployment of supply chain management.

4.4 Correlation of Knowledge and Application of SCM in Estate Surveying and Valuation Firms

The relationship between the knowledge of SCM among estate valuers and its application in practice was examined and responses were analysed and presented in Table 4.

Table 4 Relationship between knowledge and application of SCM among estate valuers

Correlation			
		Knowledge	Application
Knowledge	Correlation Coefficient	1.000	-0.036
	Significance (2-tailed)	.	0.891
	N	291	291
Application	Correlation Coefficient	-0.036	1.000
	Significance (2-tailed)	0.891	.
	N	291	291

The result as presented in Table 4 revealed a weak inverse relationship (r=-0.036) between valuers' knowledge of supply chain management and its application. This implies that the knowledge of supply chain management among estate surveyors and valuers does not necessarily translate to its application. This invariably implied that the knowledge of SCM and relevance to real estate practices are still budding and the application still limited.

4.5 Factors Affecting the Adoption of Supply Chain Management in Estate Firms

Factors hindering the adoption of supply chain management in the property market transaction and services were identified and the relative importance of each determined on a 5-point Likert scale of 5-Very Significant (VS), 4-Significant (S), 3-Unsure (U), 2-Less Significant (LS) and 1-Not Significant (NS). The relative importance indices were subsequently ranked. The result is presented in Table 5.

Table 5 Factors hindering the adoption of supply chain management in real estate services

Challenges	Total	Mean Score	RII	Rank
Lack of knowledge	1254	4.310	0.862	1st
One-off transaction	1014	3.485	0.697	7th
Lack of capacity	973	3.345	0.669	8th
Financial challenge	764	2.625	0.525	11th
Lack of trust	871	2.995	0.599	9th
Lack of relevant technology	714	2.455	0.491	12th
Competitiveness	1116	3.835	0.767	4th
Confidentiality of transaction	1206	4.145	0.829	2nd
Economic instability	1149	3.950	0.790	3rd
Poor infrastructure	826	2.840	0.568	10th
Fear of loss of control	1052	3.615	0.723	6th
Lack of training	1083	3.720	0.744	5th

Table 5 shows, amongst others, that lack of knowledge is the most significant factor affecting the adoption of SCM in real estate practices. This also corroborate the result in previous sections of the analysis that observed low level of awareness and knowledge about the principles and practices of supply chain management as it applies to property market and construction industry. Next in ranking to the lack of knowledge is the confidentiality of real estate transactions, economic fluctuations and competitiveness in the industry which rank 2nd, 3rd and 4th respectively. Thus, the high level of confidentiality that characterizes real estate transaction as well as the volatile economy and rivalry constituted significant challenges to the adoption of supply chain strategy. Furthermore, the lack of training, fear of loss of control and one-off transaction of most property market dealings have had significant effect on the engagement of SCM by estate surveying and valuation practice. The factors with the least impact or significance however include poor infrastructure, financial challenge and lack of relevant technology which ranked 10th, 11th and 12th respectively.

5.0 FINDINGS AND DISCUSSION

This study assessed the level of preparedness and engagement of supply chain management practices in real estate firms services. The aspects of VERDICT Readiness Assessment Model of Ruikar et al. (2006) was adapted to assess management preparedness, employee readiness, service/process readiness as well as ICT/Logistic adequacy/preparedness of estate firms to engage supply chain management in real estate transactions. It was observed that though, most firms operate flexible structure that could easily adopt innovative strategies such as the SCM, this is yet to become part of corporate strategy for most estate organizations as responses revealed that there is generally no policy document that stipulate the procedure of implementation of SCM for the organization's services/operations. Furthermore, it was observed that majority of the employees do not have good knowledge of SCM and have not acquired training relevant to the subject in recent time. This definitely hinders their ability to adopt and integrate the strategy in real estate firm operations. Based on the little knowledge, opinions differ on comprehensiveness of SCM plan for estate firm businesses. This is not unexpected as the scope of services offered by the firms differs. As a result, the majority disagreed that all aspects of estate firms' businesses require elaborate SCM plan. While some were of the opinion that SCM decision is about primary chain integration, some indicated that it is support chain integration and others were of the opinion that it is more of labour chain integration for real estate services. Finally on ICT/Logistics preparedness, majority of the responses revealed that most firms are not adequately equipped or prepared going by the current ICT and Logistics at their disposal. This showed that the existing ICT/logistic facilities is just adequate to support the conventional property market transactions as being carried out in real estate firms. However, the results further revealed that that the firms are capable financially to upgrade their facilities or make arrangement for logistics for effective SCM deployment. In sum, there is generally low level of preparedness among estate surveying and valuation firms to adopt and implement SCM in real estate transactions and project executions and this further corroborate the findings of Abah and Adamu (2017) that the Nigerian construction industry is not yet prepared to adopt supply chain management and certain aspects within the industry practices require attention to attain readiness.

The correlation analysis tested the relationship between knowledge of SCM among estate valuers and its application in property market deals and found that the current level of knowledge does not actually translate to application in the practice. This upholds the works of Akintoye et al. (2000) and McGeorge et al. (2002) that found that SCM is largely poorly understood in construction sector despite the prospects of enormous performance improvement benefits. Thus, the knowledge in the estate surveying and valuation professions is still low, theoretical and developing. Furthermore, factors that hinder the adoption were identified and analysis showed that lack of requisite knowledge, confidentiality, economic fluctuations, competition and lack of training are significant among other factors militating against the use in property market transactions.

6.0 CONCLUSION

Supply chain management has emerged as an innovative strategy in different economic sectors to enhance internal operational efficiency and external collaboration effectiveness. This according to Christopher (2016) is achieved through linkages and coordination, information sharing, cooperation and trust, relationship management among participant organizations and stakeholders. However, the study revealed

that the strategy is yet to be fully embraced and integrated into the business of real estate practices in the study area. Moreover, the study revealed that majority of real estate firms are less prepared in terms of relevant ICT/logistics facilities that could effectively support SCM processes. Moreover, the low level of awareness and knowledge of SCM that exist among the management and employees of estate firms as well as the lack of definite policy constitutes formidable setback to its adoption and full integration. Consequently, the study recommended capacity building programmes such as workshops and seminars on supply chain management practices for the estate surveyors and valuers in order to improve the knowledge of members about the strategy. In addition, the study further suggested that firms undertake services/process effectiveness assessment and come up with SCM plan for each aspect of the real estate services. The adoption and integration of innovative strategy such as the supply chain management in real estate practices would significantly improve service delivery and performance of the estate surveying and valuation firms and assist in the achievement of some of the United Nations Sustainable Development Goals in developing economies like Nigeria. The SDG Goal #8 which aimed to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all while Goal #9 was also aimed at building resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation (United Nations, 2015). Specifically, Target #2 of Goal #8 of the SDG seek to achieve higher levels of economic productivity, through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors. Target #3 of Goal #9 on the other hand seek to increase the access of small-scale industrial and other enterprises, in particular, in developing countries, to financial services, including affordable credit, and their integration into value-chains and markets by 2030. Improving the understanding of the estate surveyors and valuers of the concept of supply chain management would enhance the level of preparedness to adopt the strategy and facilitates the realization of the stated goals in the building and real estate industry in Nigeria.

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