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Articles

Factors Affecting the Competencies and Project Delivery of Small-Sized Indigenous Construction Firms in Lagos State

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***Abstract*:** Every industry is prone to problems Performance is a general challenge affecting construction and most especially small-sized indigenous construction companies. The study focused on determining the likely factors affecting the competencies and project delivery of small-sized construction firms in Lagos. 60 questionnaires were designed and administered to professionals (15-Architects, 15-Builders, 15-Engineers, and 15-Quantity Surveyors) working in the construction companies in Lagos State and 48 questionnaires were retrieved. These questionnaires were analysed with SPSS and several findings were derived from this analysis. The various factors affecting the performance and project delivery at varying degrees are: high cost of plants, equipment, materials and labour, lack of skilled craftsmen, unavailability of funds, poor managerial skills, lack of government patronage, and poor communication among stakeholders. The study found out that the most prominent factors are poor managerial skills, lack of project planning and unavailability of funds. The main factors affecting the performance of small sized indigenous construction firms are based on three key elements namely time, quality and cost. These three elements when properly harnessed will increase the performance of small sized indigenous firms. The study recommended that the use of ICT would help improve performance by making work flow more easily. Access to bank loans and more machinery on site and sufficient government patronage would improve performance. It concluded that better management and project planning would go a long way in improving competencies and project delivery of small sized construction firms.

Key Words: Construction, indigenous firms, Performance, Small-Sized.

1. Introduction

Building construction is the process of assembling materials to form a building; it is generally performed by labourers and craft people engaged by an individual or organization called a contractor (Chudley and Greeno, 2010). The construction industry is made up of an organised formal sector of foreign companies and unorganised sector which comprises indigenous companies.

They are classified into small, medium and large scale according to their levels of capitalization and annual turnover. Indigenous construction firm is one that is established under the Nigerian decree and has no other home base but Nigeria. According to McGarvey, Booker and Stafford (2013), the size of building construction firm is determined by the number of employees. The small building firms have employees less than 10, while medium sized contractors have workers ranging between 10 and 499 while large sized contractors have above 500 workers on their payroll. Foci Report (2012) defined performance as the execution or accomplishment of work, acts or feats. Project performance is a critical issue for the construction industry and success of construction projects depends mainly on success of performance. Performance is related to many topics and factors. It is important to recognize the factors that affect performance in the construction industry particularly small indigenous companies. There are several factors from financial management to material and equipment and so on.. A lot of small indigenous companies have been subject to these factors in terms of cost, inadequate infrastructure, absence of motivation, and so on.

It is shown from previous studies (Karim and Marosszeky, 1999; DETR (Key Performance Indicators Report), 2000; Lehtonen, 2001; Samson and Lema, 2002; Kuprenas, 2003; Cheung etal, 2004; Iyer and Jha, 2005; Navon, 2005; Ugwu and Haupt, 2007) that the failure of any project is mainly related to the problems and failure in performance. However, the study focused at determining the likely factors affecting competencies and project delivery of small-sized construction firms in Lagos and how these factors affect project cost, time and quality. The study highlighted the challenges small sized indigenous firms are facing, showed the relevance/importance of management in construction project and recommended solution for owners of small sized indigenous firms to help them avoid performance challenges. This study will add to the existing body of knowledge. Lastly, the study also acts as a guide for further and more detailed studies on the subject matter.

The scope of this research is limited to identification of essential factors affecting performance of indigenous construction firms in Lagos. Indigenous construction firms can be classified as small, medium and large scale. This study focused on small scale because most times studies were carried

out on the medium and large scale firms and the small scale firms seemed neglected. The study is limited to only construction firms in Lagos state. Lagos state is chosen because a lot of construction is taking place in Lagos state presently. herefore conducting this research now gives a better understanding on the factors affecting competencies and project delivery of small indigenous construction firms and also because there is easy access to information.

2. Literature Review

In many countries, researchers use different definition and criteria for the term small scaled firms Small sized construction firms are firms that can be identified by their stratification, annual turnover, number of employees, total amount of wages and salaries, number of machinery and registrations category with the federal board. Firm size can be defined as the level of economic activity and capacity; valuation criteria of a firm are based on two different criteria, qualitative criteria and quantitative criteria (Basmanav, 2001). Qualitative criteria to identify the size of a firm are independent management, working for local market, having a very small part in the sector and having main capital of the firm supplied by the owner of the firm. Quantitative criteria to identify the size of a firm is defined by the number of employees, firm capacity, the total amount of wages and salaries, total amount of firm capital, production amount, total amount of sales, machinery pack size, total of active values, and amount of raw materials used (Olcay, 2010). The number of employee criteria is the most used criteria because it is easily determined. Any of these criteria can be considered to define a firm's size (Alpugan, 1998). According to the Oxford dictionary, performance is defined as the manner in which or the efficiency with which something fulfils its intended purpose. According to Krishna *et al.* (1999) countries that have better institutional development, as measured by the efficiency of their judicial system, have larger firms. Also, firm size should be positively correlated with financial development. Large firms can be differentiated from small and medium firms by their extensive structures.

2.1 Features of small sized construction firms

According to Dinmez (2005), there are different characteristics or features of small sized construction firms and they are management, strategic planning, organization, finance, accountancy, marketing and sales, public relations, human resources, information technologies. In small sized firms, there is a management type which is not

professional and is managed by one person's decision and benefits. According to Olcay (2010), project management techniques are not used and since there is no management in which the decisions are taken by forming strategies in a planned way, the firm will experience a lot of problems. In small sized construction firms, the firm owner has to deal with issues such as financing, organization, marketing and sales, material supply and employment of qualified personnel and workers as well as taking management decisions. In small sized construction firms department of sale, financing and human resources are unavailable. Small construction firms do not have financing departments and a financing expert as that would increase cost and financial alternatives. Generally in small sized construction firms, one person is enough to keep all accounting records. However, because only one person is handling the accounting records, the possibility of a mistake is almost inevitable. In small sized firms, public relations do not work as a separate department. A desk study of road projects data at Roads Authority Malawi showed that outstanding among Small Scale Construction firms' shortfalls were poor quality of work, failure to complete projects on time, and poor tender preparation and estimation Kulemeka, Kululanga, and Morton (2015). Chilipunde, (2010) highlighted constraints and challenges faced by small, medium and micro enterprise contractors in Malawi emphasized that timely delivery of projects is one of the important needs of clients of the construction industry.

2.2 Nigerian Construction Industry Overview

The construction industry is regarded as one of the most important sectors of every economy in the world. The Nigerian construction market is among the largest construction markets in Africa, (Foci Report 2012). According to forecast by Global Construction Perspectives and Oxford Economics (2010), Nigeria's construction industry is growing fast and is likely to grow very large over the next decade. The industry is made up of an organised formal sector and an unorganised informal sector. The formal sector comprises foreign and indigenous companies, which are classified into small, medium and large scale according to their level of capitalisation and annual turnover. According to the Foci Report (2012), the Nigerian construction market is dominated by foreign companies, which is similar to most African Countries. A large proportion of these major constructing firms in Nigeria are subsidiaries/affiliates of

European, North American and Asian construction firms. However, governments, private clients and individuals award building contracts to local construction companies. The industry also employs a large number of people and therefore it has an effect on the economy of a country during the actual construction process. According to Mafimidiwo and Iyagba (2015), one of the key player in the construction project team is the contractor (Usman, *et al*. 2012; Idoro, 2011;). Construction contractors are entrepreneurs involved in the management of construction projects (Inuwa *et al*.2013; Harris and McCaffer, 2005). Firms, companies or organizations that execute construction works are referred to as contractors. They offer their skills and services and accept the challenge of executing the works in exchange for financial reward, (Ugochukwu and Onyekwena, 2014). Odediran *et a*l (2012) opined that like other nations of the world, building contractors in Nigeria could be classified as small, medium and large. In Nigeria, large firms are majorly dominated by the expatriates with very few indigenous that could be categorized as medium while most are categorized as small size firms. Idoro (2011); Idoro and Akande-Subar (2008), Muazu and Bustani (2004) categorized construction contractors by several criteria: scope of operation (local, regional, national and multinational); specialization (building and engineering); size and category of contracts (small, medium and large); and the nationality of owners of the company (foreign and indigenous). It has been reported by researchers (Takim and Akintoye, 2004; Kashwagi, 2004) that most clients are dissatisfied with the outcome of construction projects, especially because their expectations are not met.

Ugochukwu and Onyekwena (2014) in their research on the participation of indigenous building contractors in Nigerian public sector construction projects and their challenges in managing working capital found out that the common challenges facing Nigerian indigenous building contractors in Nigeria in the area of working capital management are low awareness of the need for working capital management, one-man business setbacks, under-capitalization, poor funding and cash flow problems, high cost of construction finance, economic recession, reckless spending and diversion of funds, poor project planning and control.

2.3 Factors Affecting Performance of Small Sized Firms

In the study of small sized construction firms, it is observed that small indigenous firms in

Nigeria face similar problems as small firms in other developing countries. There are some problems that have been identified in different literature reviews and they are as follows :lack of finance, delay in the payment of contractors for work done, changes/ variations, low morale and motivation of craftsmen, poor management skills, material and plant related factors like unreliable material base and availability of plants and equipments, poor communication, cost factor, time factor, quality factor. (Ugochukwu and Onyekwena, 2014; Odediran *et a*l, 2012, Mansfield *et al.* 1994 , Wasi et al, 2001, Eshofonie, 2008; Ibironke *et al.* 2011 Abdullah, Bilau., and Enegbuma. (2011); Amoah, Ahadzie , and Dansoh (2011).

2.3.1 Poor Managerial Skills

Management has the most significant influence on the continual survival of construction firms in Lagos state (Odediran, *et al*.,2012). According to Mansfield *et al.* (1994,) management challenges may occur during a project due to the way contracts are awarded. In most cases projects are awarded to the lowest bidders and some of these low bidders may lack management skills and over all site management and allocation skills. Wasi et al. (2001) noted that deficiency in planning and management skills is said to be the greatest single problem for small-scale contractor but it does not only affect small scaled contractors but also small sized firms. Management is very important to adequately face difficult challenges because without managerial skill it would be impossible to manage workers, materials, resources and the whole construction project successfully.

2.3.2 Financial Management

Financing a project is a very tasking job. All resources need to be controlled: labour productivity, material availability, material waste, good and effective methods, using effective tools, equipment, good project planning and scheduling (Eshofonie, 2008). According to Wasi *et al.* (2001), sometimes project funds can be used for personal matters which could lead to financial strain in projects. Financial factors such as insufficient profit, heavy operational expenses, insufficient profit, country's economic conditions, poor estimating and job costing are also identified as causes of failure (Amoah, Ahadzie, and Dansoh 2011). According to Odediran *et al.* (2012), majority of these firms do not have the capacity to finance a project after from the finance originally contributed by the client and therefore cannot go into long term financing and partnership. Adediran *et al.* also stated that most of the projects

handled by small sized indigenous firms are funded by the clients' personal funds. These firms most times do not get bank loans to finance the project, and there is also a poor saving culture among the firms

2.3.3 Time factor -Changes/ Variations

This challenge can occur from inadequacy of project planning and management of the design process. It can also be a fault on the part of the architect and structural engineer in their architectural and structural designs respectively. There might be variations in their drawings. The client can also change his mind about a particular design and changes would have to be made. Frequent changes to design can cause workers to lose interest in the project. Examples of other time factors include time needed to rectify defects, site preparation time, percentage of orders delivered late, etc (olcay 2010; Azlan and Ismail 2009.)

2.3.4 Cost factor -Material and equipment cost

Material and equipment cost is one of the project cost components that affects owners liquidity and project budget. Most heavy equipment run by diesel fuel and the price of diesel fuel has increased significantly (Eshofonie, 2008). Also unreliable material base and unavailability of plants and equipments can affect a project. In order to meet certain production targets and carry out projects on time, it is necessary to introduce mechanical plants and equipment to improve man power. Other cost factors include cash flow of project, project design cost, overhead percentage of project, profit rate of project, waste rate of materials etc (Chilipunde, 2010;Free library, 2009)

2.3.5 Quality Factors

Due to the nature of small sized firms, most firms lack the availability of competent staff as hiring a well-qualified staff with experience can be too expensive for the firm. Thus there may be challenges during a project like workers or contractors not following the right procedures or working in accordance to specifications given. There may also be the challenge of using substandard raw material in the vein of saving cost. This can reduce the life span of the building, risk the lives of occupants, increase maintenance work and even cause the collapse of a building. Other examples of quality factors include quality assessment system in organisation, quality training/meeting, etc (Ugochukwu and Onyekwena, 2014;Free library, 2009).

2.3.6 Delay in the Payment of Contractors for Work Done

Paying contractors on time can be a good source of motivation for

them to work more and even worker harder. According to Edmonds and Miles (1984) chronic delay in the payment of contractors is a factor that could affect performance in a project. Delay in payment affects the contractor's cash flow and because of the need for cash, he might begin to work on other small projects in other to generate money. By so doing, he does not pay full attention to the main project and this can lead to performance failure. (Ugochukwu and Onyekwena, 2014)

2.3.7 Low Morale and Motivation of Craftsmen

Motivation is a means of encouraging people to do something. It is a way of getting things done willingly from others. If workers are not motivated to work, their morale will decrease and their performance would also decrease. According to Ibironke *et al.* (2011) implementing a well formulated motivation policy triggers the innate qualities of labourers by enhancing their productivity. Workers who are inadequately motivated become care free or even resentful of their work Ng et al (2004) cited in Ibironke *et al* (2011). Material unavailability can also demotivate workers.

2.3.8 Poor Communication

Poor communication skill in construction can be a major problem. Wasi *et al. (*2001) stated that in developing countries, communication between workers on site and the contractor's office is very limited. Therefore urgent site problems cannot be solved immediately due to lack of communication between site workers and managers (Abdullah, Bilau, and Enegbuma 2011).

3.0 Research Methodology

This study entails the process of examining and carrying out a survey on small-sized indigenous construction firms in Lagos towards assessing their current state so as to identify factors that affect their competencies. The descriptive survey method was adopted for this research and data were obtained by means of survey using questionnaires. The population studied in this research work are, Builders, Quantity Surveyors, Civil Engineers, Architects, and some other professionals in the building construction industry. Population characteristics include education level, nature of client organization, number of years in practice, place of work, source of funds for projects, professional qualifications and roles/duties performed in the firm. The population of this study were taken from small-sized indigenous construction firm located in Lagos state. The firms were picked from a list of indigenous construction firms obtained from the Lagos State Ministry of works. The major reason for choosing Lagos is the

easy accessibility to the respondents. Therefore for this research, 30 indigenous construction firms were used as case study and 60 questionnaires were given to these firms and 48 questionnaires were retrieved. The random sampling method was used to select individuals for the study. This is because the random sampling method is the most fundamental method of probability sampling. Its probability is applied in all probability sampling method (Asika, 2002).

Data was collected by means of questionnaires. The questionnaires were hand delivered to some small-sized indigenous firms and each firm was asked to complete two questionnaires. The questionnaires contained the factors identified and all the data required for the study were collected over a period of time and were self-administered. Primary and secondary data were used. Primary Data involves data collected from respondents' responses to the questionnaires. Oral responses were also obtained where necessary. Secondary Data involves data collection from textbooks, journals, articles, reports from within and outside the Nigerian construction industry and internet. The data collected from the administered questionnaire were analysed using the Statistical Package for the Social Sciences (SPSS) for analysis.

4.0 Presentation of Data Analysis and Interpretation

4.1 Presentation of Data Analysis

A total of 60 questionnaires were administered and 48 responses were received, representing 80% effective response rate. The questionnaires were divided into section A, B and C.

4.2 Section A: Background Information of Respondents

Table 1: **Personal characteristics of respondents**

Personal characteristics of respondents	**N**	**Percentage (%)**
Individual	8	16.6
Corporate body	12	25.00
Partnership	28	58.33
Gender distribution		
Male	33	68.75
Female	15	31.25
Age of respondents		
20-30 years	7	14.58
31-40 years	15	31.25
41-50 years	18	37.50
51years and above	9	18.75
Designation of the respondents		
Managing Director	7	14.58

Head of Department	18	37.5
Project Manager	11	22.91
Contracts Manager	9	18.75
Others	5	10.41
Academic qualification		
HND/B.Sc.	30	62.5
PGD	6	12.5
MSC/MBA/Ph.D.	10	20.83
OTHERS	2	4.17
Professional background		
Builders	11	22.91
Quantity surveyor	8	36.59
Architect	9	18.75
Civil engineer	20	41.67
Working experience		
1-10 years	15	31.25
11-20 years	21	43.75
21-30 years	7	14.58
31years and above	5	10.41

20(41.67%) Engineers make up the largest number of consultants in this research, followed by 11(22.91%).Builders, 9(18.75%) Architects and 8(16.67%), Quantity surveyors. 30(62.5%) of respondents have HND/B.Sc. qualifications, 6(12.5%) with PGD and 10(20.830%) with M.Sc./PhD qualifications, and 2(4.17%) with other qualifications 15(31.25%) of the respondents have served in their organization for less than ten years, 21(43.75% of the respondents have served in their organization between eleven and twenty years and 7(14.58%) between twenty one to thirty years respectively, while 5(10.41%) have served above thirty one years.

It is shown that most of the respondents possess a working experience ranging from eleven to twenty years. However those in the eleven to twenty years category are more with 43.75%, those in the twenty one to thirty years category were 14.58%. It shows that the respondents are well experienced. Majority (47.91%) of the respondents have staff strength of less than twenty five staff with 35.42%, 28.9% have twenty six to fifty staff, 16.67% have fifty one to seventy five staff, and 0% have seventy six to hundred staff. 41.67% of the respondents get their funds from the bank, 37.5% from client, 14.58% get their funds through other means and only 2.6% get their funds from government.

4.3 Section B - Challenges affecting competencies and project delivery

The factors affecting performance was analysed by Frequency Index. The frequency index (F.I)

was obtained by using the formula:

$$F.I = \frac{5(\mathbf{1}) + 4(\mathbf{2}) + 3(\mathbf{3}) + 2(\mathbf{4}) + 1}{(5(\mathbf{1+2+3+4+5})}$$

Where: **1** = Very Important
2 = Important
3 = Undecided,
4 = Fairly Important,
5 = Not Important

The factors were ranked from the highest to the lowest based on the frequency index.

Table 2: Factors Affecting Performance

	Frequency				FI		Ranking
Factors Affecting Performance	**5**	**4**	**3**	**2**	**1**		
Poor managerial skills	27	13	5	3	0	0.87	1
Lack of project planning	28	11	5	4	0	0.86	2
Unavailability of funds	25	12	6	5	0	0.85	4
High cost of plants and equipment	28	10	6	2	2	0.84	3
Lack of Government patronage	19	16	7	5	1	0.8	5
Lack of motivation of labour	20	15	6	5	2	0.79	6
High cost of labour	15	18	9	6	0	0.78	7
High cost of materials	16	18	5	5	4	0.75	8
Lack of communication	13	18	8	5	4	0.73	9
Lack of skilled craftsmen	11	11	10	8	8	0.64	10

Table 2 shows that poor managerial skills (0.87) is the most ranked factor, lack of project planning (0.86), unavailability of funds (0.85), high cost of plants and equipment (0.84), lack of government patronage (0.8), lack of motivation of labour (0.79), high cost of labour (0.78), and high cost of materials (0.75) are also important factors affecting the performance of small sized indigenous construction firms. The table also reveals lack of communication (0.73), lack of skilled craft men (0.64) as the least factors affecting the competencies of small sized indigenous firms in Lagos state

Table3. No of government projects tendered for by respondents and number of projects awarded.

Private Projects Tendered For	Frequency	Percentage (%)	Private Projects Awarded	Frequency	Percentage (%)
5-10	4	8.33	5-10	3	16.67

11-15	8	16,67	11-15	9	29.1
16-20	16	33.33	16-20	17	35.41
Above 20	20	41.67	Above 20	19	18.75
Total	48	100	Total	48	100

Table 4 shows that 8.33% of the respondents have tendered for five to ten private projects, 16.67% have tendered for eleven to fifteen private projects and 33.33% have tendered for sixteen to twenty private projects and 41.67% have tendered for over 20% .Interestingly, 16.67% of the respondents have been awarded between five to ten private projects 29.17%, have been awarded between ten to fifteen private projects, 35.41% have been awarded between sixteen to twenty government projects, and 18.75% have been awarded above 20 private projects. Compared to the number of government projects awarded, it can be seen here that a better percentage of respondents are awarded more private projects than government projects.

4.4 Section C- Strategies to improve performance of small sized indigenous construction firms.

Table 5 suggests the most effective ways of improving the performance of small sized indigenous construction firms.

Table 5 Strategies to improve performance of small sized indigenous firms

	Frequency			F.I			Ranking
Strategies	5	4	3	2	1		
The use of ICT would help improve performance by making work flow easier	28	15	5	0	0	0.89	1
Access to bank loans would help improve performance.	26	18	2	2	0	0.88	2
Sufficient Government patronage would improve performance	24	16	6	2	1	0.86	3
More machinery on site would improve performance.	22	15	6	4	1	0.84	4
Incentives for site operatives would improve performance of work by motivating employees performance	25	12	6	5	0	0.83	5

Experienced labour on site would improve performance	22	13	8	4	2	0.83	6
Skilled personnel on site would improve performance.	23	14	6	5	0	0.82	7

The five most effective ways of improving construction performance are: The use of ICT would help improve performance by making work flow easier (Ariel and Paul 2010, Navon, 2005).; Access to bank loans would help improve performance; Incentives for site operatives would improve performance of work by motivating employees performance to the best of their ability; Sufficient government patronage would improve performance The initiative to support the SMEs has mainly been the direct or indirect responsibility of governments as observed by Thwala and Mvubu (2008), in the success stories from countries such as Malaysia and Singapore.; More machinery on site would improve performance.

4.5 Discussions and Findings

Most of the respondents are of the opinion that poor managerial skills is the most important factor affecting performance in small sized indigenous firms in Lagos state. Project management techniques are not used and since there is no management in which the decisions are taken by forming strategies in a planned way, the firm will experience a lot of problems. It is in agreement with Ugochukwu and Onyekwena (2014) which stated that challenges facing indigenous contractors low awareness of the need for working capital management, one-man business setbacks, under-capitalization, poor funding and cash flow problems, high cost of construction finance, economic recession, reckless spending and diversion of funds, poor project planning and control. Lack of project planning was ranked second. This is very understandable because of the complex nature of resources, processes, activities and parties that are involved in construction. Kulemeka et al (2011) in their study of safety critical incidents among small building contractors observed that small building contractors tend to inherit the problems that were not resolved in the earlier construction planning stages. Project planning helps in the completion of assigned amount of work within a fixed time. Unavailability of funds, Laryea (2010) studied the current challenges and opportunities facing building contractors in Ghana. The findings indicated that significant challenges relating mainly to

financing for projects and a harsh business environment High cost of plants and equipment, all ranked as third most important factor affecting performance in small sized indigenous construction firms. High cost of labour can be caused by inflation. In recent times, Nigerian Government patronise foreign companies more than their indigenous counterparts leaving their own contactors starved of work, inexperienced and therefore are unable to compete with their foreign counterparts. According to Saleh (2008), increase in government patronage and sufficient commitment of Government to policies that would promote indigenous contractors, would increase competence and boost experience of indigenous contractors.

5.0 Conclusion and Recommendation

Poor managerial skills make it impossible to manage workers, materials, resources and the whole construction project successfully. Consequently, better management and project planning would go a long way in improving performance of small sized construction firms. The use of ICT would help improve performance by making work flow easier; Access to bank loans would help improve performance; Incentives for site operatives would improve performance of work by motivating employees performance to the best of their ability; Sufficient government patronage would improve performance; More machinery on site would improve performance.

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Leadership Succession Planning: An Examination of Sole Proprietor Estate Surveying and Valuation Firms in Lagos Metropolis, Nigeria

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Abstract: This paper reports the results from a survey of 38 small sole- proprietor estate surveying and valuation firms in Lagos, Nigeria. A 45% questionnaire retrieval rate was achieved while CEOs/owners of estate surveying and valuation firms were interviewed. Descriptive statistics were used to analyze the respondents' general characteristics as well as their attitude toward business succession planning. The study found that sole-proprietor firm owners desired that their firms outlive them through transferring of the firms' businesses to their next generation. However, majority of these sole proprietors' next generation were not keen on pursuing real estate business related courses in their undergraduate days in view of their exposure to modern technology and the influence of peers. Also, the study found that the owners of these firms have not, as a matter of policy, planned for their succession because of the cultural and attitudinal beliefs and values, which forbid thoughts about death or incapacitation about a living soul. As a result, the study indicated that only 5% of sole proprietor estate surveying and valuation firms in this category have continued to the second generation in the study area. This outcome has serious implications for small professional service businesses' economic and job creation potential for Nigeria.

Keywords: Succession Planning, Sole Proprietor Firm, Estate Surveying and Valuation Firm.

1. Introduction

Professional advices, more than ever before, are daily becoming more challenging in various ways. Integrity is dwindling among employees as much as in employers of labour, real estate business inclusive. Academically, standards are fallen as certificates obtained in some educational institutions are subject to doubts based on the performance of a few of their products. In view of the glaring poor performance in the past twenty years, heavy political upheavals and election re-runs, poor economy and the ever increasing unemployment situation in Nigeria coupled with inability of the monthly entitlements of State government employees, the economic landscape in Nigeria has actually changed. The identified disruptive tendencies have produced changing customer expectations

therefore for any service industry to survive or compete and win in today's business world, such service firm needs to cultivate executive talent and teams that can recognize and seize strategic opportunities in constantly shifting conditions. Succession planning can help minimize the disruptive tendencies occasioned by unplanned leadership change.

Westhead [2003] explained that the reason of succession failures is mainly the lack of planning and preparations since people claim that the operational demands of running a service firm can be all-consuming, forgetting that it is very vital that business leaders take the time needed to assess their organization's business succession planning. As a business grows, the long-term survival of the business and the preservation of the wealth that has been saved will likely depend on getting ahead of those changes through strategic succession planning. For owner-managed business, a solid succession plan can stimulate the growth of the business, reduce taxes, and set the stage for retirement. No one would go through the troubles of establishing a service firm, bearing the risk associated and making the necessary sacrifices without hoping that the business outlives him. Knowing and relentlessly building value that endures is the dream that motivates entrepreneurs but, surprisingly, in many businesses, too little of that work goes into determining who will take over when the founders leave the stage later or sooner than anticipated. In the words of Gersick et al., (1999), succession is the final test of any business outfit because if business becomes large, continuity becomes a unifying interest and if the enterprise is passed on while it is profitable and in good condition, it will be the main driving force for the new generation of leaders.

2. Literature Review

2.1 Succession Planning in Estate Surveying and Valuation Firms

Most estate surveying and valuation firms are small scale enterprises. Berryman (1983) defined a small enterprise as a business in which one or two persons are required to make all the critical management decisions such as finance, accounting, personnel, purchasing, processing or servicing, marketing and/or selling, without the aid of internal specialists and with specific knowledge in only one or two functional areas. They are smaller, more localized firms which constitute a significant proportion of the industry and provide tailored services to smaller customers in their geographic area. Hillman (2003) noted that such firms are of sole proprietorships adapting to fit the needs of the changing market

through business specialization. Bucher and Stelling (1969) found that the professionals in such service firms tend to resist traditional roles, highly spontaneous and more competitive and politically active as they aspire to become recognised and relevant in business.

Headd (2000) studied small businesses in America and found that they represent a significant portion of the global economy, employing one-half of the entire work force while Anonymous (2006) confirmed that they represented 99 percent of all businesses in America. Although small business ventures contribute to the local economy and are a source of growing capitalism around the globe yet they face a number of challenges in areas such as acquiring resources, obtaining and retaining clients. Research by Klein (1999) found that about 50 percent of small businesses fail in the first five years of existence owing to poor organization occasioned by ineffective management of the transition from one life cycle stage to the next.

World Bank (2007) study on small and medium enterprises in Africa showed that problems that existed among small local markets included undeveloped regional integration and very difficult business conditions. These difficult business conditions include cumbersome official procedures, poor infrastructure, poor legal systems, inadequate financial system and unattractive tax regimes. The World Bank (2007) defined succession planning as a process that takes years of careful decision-making to set the stage bearing in mind, the forces of at play in succession planning. The supply element is focused on assessing and developing talent along defined principles so that the people you see as your successors will be ready for their future roles, while the demand element considers compensation planning to make sure those rising leaders know you appreciate them, so they either join or remain with the company long enough to play those roles.

2.2 Leadership Types, Characteristics and Outcomes

Various researchers identified twelve types of leadership. These types of leadership and the researchers concerned are: Responsible leadership (Maak and Pless, 2006); Stakeholder leadership (Galan, 2006); Ethical leadership (Brown and Trevifio, 2006); Servant leadership (Greenleaf, 2002); Authentic leadership (Walumbwa et al., 2008); Transformational leadership (VanDierendonek, 2011); Charismatic leadership (Kanungo, 2001); Spiritual leadership (Fry,2005); Virtuous leadership (Havard,2007);

Stewardship theory of leadership (Davis et al., 1997); Relational leadership (Schnelder, 2002) and Shared leadership (Lord and Brown, 2004).

Many factors lead to the challenges faced in succession planning. First, is the inability to pin down very few members of staff or any of the firm's owner children with requisite skills and attributes. Second, Managers are often to blame for failing to cultivate leadership talent in the junior managers. Most people pay little attention to structuring job experiences, do little to furnish appropriate models and rarely provide ongoing reinforcement and support for the skills and competencies available via training. In a few cases, individuals who truly want to develop and bring positive change to a firm may ultimately be misconstrued of their intention and thus leave in frustration. According to Rahman (2012), highly skilled workers are not often comfortable with the traditional autocratic leadership styles hence 'job hopping has become a trend among young highly qualified and experienced people.

2.3 Leadership Competencies and Traits

Leadership is commonly seen as an important variable affecting organizational performance. Leadership is a process by which an individual influences a group of individuals to achieve common goals. Yukl (2006) found several traits that were related to leadership effectiveness which include a high energy level and tolerance for stress, self-confidence, including self-esteem and self-efficacy, an internal locus of control orientation, emotional stability and maturity, and personal integrity. The skills approach suggests that while leadership abilities can be developed, whereas traits are more inherent in an individual.

Leadership competencies have been defined as "the combination of knowledge, skills, traits, and attributes that collectively enable someone to perform a given job" (Zenger and Folkman, 2002). Yukl (2006) offered some general suggestions for applications on leadership styles. These styles include maintaining self-awareness, developing relevant skills through continuous learning and leadership development, noting that strength can become a weakness in a different situation, and compensating for weaknesses by using delegation or staff with complementary skills.

Attitudes are a complex combination of things we tend to call personality, beliefs, values, behaviors, and motivations. An attitude includes three components: an affection (a feeling), cognition (a thought or belief), and behavior (an action). Attitudes help us define how we

see situations, as well as define how we behave toward the situation or object. According to Yuki (2006), leaders who want to be great must think about the future most of the time by thinking about where they are going rather than where they have been, maintain a positive attitude and think about the opportunities which tomorrow may avail rather than focusing on the problems of the past and finally maintain a positive attitude in addition to being long-term thinkers. At all things and in any situation, one of the most important leadership qualities is the acceptance of personal responsibility. Leaders never complain, never explain and instead of making excuses, they make progress and accept responsibility for either success or failure of any action taken.

2.4 Leadership Succession Planning

Winn (2000) noted that a business owes its success to the drive, vision and creative energy of its owner and identified four main components to leadership succession planning. These are: identifying the potential successor; changing management style; successor training and development and selecting the successor. The sole-proprietor must be able to identify what the firm need from the future leader, what the future leader needs from sole-proprietor owner, the extent of would-be leader strategic thinking and consistent drive for results, ability to lead and build talent, entrepreneurial edge and commitment to the firm's mission and values. In the same vein, the future leader needs the support of the owner to ensure consistent drive for results, commitment to the firm's mission and values, identify opportunities for firm growth, ensure competitive compensation and give rewards and recognition by acknowledging value of contribution of the future leader.

The role of leaders, according to George (2003), in today's turbulent environment is crucial. Leaders can be identified and chosen through their skills and talents. According to Mumford et al., (2007) there are cognitive, interpersonal, business and strategic skills. A future leader must be able to communicate clearly in writing or by discussion, be an active listener and be able to weather turbulent periods with less stress. It must be borne in mind that leaders, depending on their intentions, visions, experience, strategies, objectives, hidden drives and motives, education and expertise have the power to cause either significant improvement or degradation of the world around them. In the words of Hollenbeck et al., (2006), a high potential leader must always seek opportunities to learn, act with integrity, adapt to cultural

differences, be committed to make a difference, seek broader business knowledge, bring out the best in people, sees things from a new angle, has the courage to take risks, seek and use feedback, learn from mistakes and be open to criticism. It is through all these that a potential leader can be identified and chosen.

Methodology

According to Denzin and Lincoln (2005), a study of succession planning of individual firms is a social phenomenon. For this reason, the researcher employed the descriptive survey method by presenting facts concerning the nature and status of a situation, as it exists at the time of the study.

According to the 8th edition of the directory of the Nigerian Institution of Estate Surveyors and Valuers (2014), there are eight hundred and forty-four (844) Estate Surveying and Valuation firms in Nigeria. From the collated list by ESVARBON office, apart from the 23 demised sole proprietors as at 12th November, 2014. There are three hundred and sixty-six (366) estate surveying and valuation firms with their head offices in Lagos State alone. Thus Lagos State accommodates about 43.4% of the entire Estate Surveying and Valuation firms in the country. Simply put, 366 principal partners/owners of the firms would form the study population of Estate Surveyors and Valuers to be used for the study. Taking 10% of the population of 366 principal partners/owners of the firms in Lagos State as the sample size, the study sampled 8 firms in Victora Island, Ikoyi and Lekki axis; 13 firms within Broad Street /Marina, Yaba axis; 4 firms within Surulere, Ilupeju, Anthony, Festac, Isolo axis; 12 firms within Ikeja, Maryland Magodo, Ojota, Egbeda, Magodo and 1firm within Apapa, Ojoo axis. Thirty-eight firms were involved in the study across board. Responses to items on the each questionnaire were analyzed using several descriptive and inferential statistic methods with the use of Statistical Package for Social Science (SPSS) Version 16.0. The results of data analysed were presented with the use of tables, charts, percentages, mean and ranking.

Data Analysis and Discussion

Thirty-eight questionnaires were distributed to staff of sole-proprietor estate surveying and valuation firms and monitored for retrieval between December 2015 and February, 2016. It took many personal visits to the respondents before 17 questionnaires were retrieved giving a 44.7% success rate. This could be as a result of members of staff of CEOs/Founders estate surveying and valuation firms were reluctant to commenting on their employers. All efforts to guarantee the confidentiality of any information willingly given,

by any of them, fell on deaf ears. Only 17 CEOs/Founders gave express permission for their staff to fill the questionnaire.

Table 1: General Data on CEOs/Founders and Staff of Selected ESV Firms

Information	Groupings	Staff (%)
Age	Up to 30 years 31-40 years 41-50 years	7 (41%) 6 (36%) 4 (23%)
Academic and Professional Qualifications	(a) HND/B.Sc. (b) Probationer (c) ANIVS (b) ESV (c) RICS	17(100%) 3 (18%) (49%) 8 (27%) 1 (6%)

The age groups of staff of estate surveying and valuation firms sampled showed that 41%were within 26 and 30 years of age with another 36% being between 31 and 40 years of age. One can safely infer that this category of staff are matured enough to handle sensitive issues concerning real estate business transactions between staff and clients as well as between staff and founder/CEO. With these age groups, issues relating to leadership succession at the lateral level must have been heard about in the office level thereby gingering thoughts on vertical leadership succession as people in business age along. For staff members who are curious, family leadership succession challenges among children of or among children and wives of deceased clients, whose properties the firm is managing, must have been an eye opener.

An examination of the academic status of staff showed that all of them have either HND or B.Sc., 49% were associates while 27% were fully registered. This is as expected of a truly professional firm qualified for government or corporate assignments both nationally and internationally. In terms of firm size, 70% of estate surveying and valuation firms sampled are of small size. 75% of staff in the firms surveyed concluded that leadership succession challenges rear their ugly heads where the family of the sole proprietor firm becomes unreasonable in terms of financial demands or, in some instances, insist on having their favorites in office. In addition, eight other factors were given as human-induced challenges that do hinder leadership succession in professional service firms. Where any of these eight listed human weaknesses (Table 2) are found to be conspicuous, on the part of a sole proprietor/manager or the family of a deceased owner of firm, choosing a leader may be

very cumbersome and where care is not taken, may lead to the winding-up of the firm in the end.
From the data analysed, as in Table 2, being stingy, greedy and selfish were considered very common among human beings while been too rigid on official and management issues were considered common among people who fail to see official position of leadership as a transient post.

Table 2: Staff Opinion on Human Weaknesses

S/n	Human Weaknesses	Staff opinion of sole proprietors
I	Too rigid	Common
Ii	Not accommodating	Very rare
Iii	Greedy/selfish	Very common
Iv	Uncaring	Rare
V	Wasteful	Rare
Vi	Stingy	Very common
Vii	Morally weak	Very rare
viii	Likes gossips	Very rare

Among people in leadership positions, especially male sole-proprietor firms, being uncaring or wasteful were considered rare while being morally weak or being interested in gossips were considered very rare. For any service firm to be sustainable, the manager needs to be caring, very accommodating, avoiding gossiping and bearing in mind, the interest of staff of the firm while making the best use of available income at all times.
The road to leadership of any organization is not dependent on the academic achievement of man alone. To be an achiever in business, a man must imbibe the four leadership attributes listed in Table 3and make same his frame of mind at all times. The data analysis shows that the crop of leaders among estate surveying and valuation firms within the study area performed poorly in the areas of thinking about where they are going rather than where they have been, as well as, forgetting the problems of the past and thinking about the opportunities of tomorrow.

Table 3: Assessment of Leadership Attitudes by staff

S/N	Attitudes	Scoring
1	think about the future most of the time	Good
2	think about where they are going rather than where they have been	Poor
3	maintain a positive attitude	Good
4	forgetting on the problems of the past and thinking about the opportunities of tomorrow	Poor

Human beings tend to remember too often the so called "class or level" they belong, i.e. where they had been in the past. Again, human beings remember too often someone who had refused to 'play ball in business' forgetting that there are many competitors in business deals. These poor attitudes need to be seriously addressed to move the real estate profession forward.

Another major issue of concern towards being relevant in any business setting is leadership competence. A leader, who wants to excel must be capable of maintaining self-awareness, developing relevant skills through continuous learning, remembering that strength can become a weakness in a different situation and compensating for weaknesses by using staff complementary skills through delegation of duties. All these four competencies must be pronounced in a man who desires to be referred to as competent in his area of calling.

Tale 4: An Assessment of Leadership Competencies by staff

S/n	Leadership Competencies	Scoring
A	maintaining self-awareness	Very glaring across board
B	developing relevant skills through continuous learning	Low because they refer always to years of experience
C	remembering that strength can become a weakness in a different situation	Very low and arrogant
D	compensating for weaknesses by using staff with complementary skills through delegation of duties	Yes but not rarely acclaimed

Cross sectional responses from structured interview among staff of sole proprietor estate surveying and valuation firms, in the study area, showed that maintaining self-awareness was the leadership trait considered very glaring among estate surveying and valuation proprietor-firms. This is expected because for any service oriented firm to be sustainable in a competitive environment, the leader must be able to stand shoulder-to-shoulder with others in his field of endeavour.

No man can be an island in a dynamic business such as the real estate business. Laws vary a bit across geo-political zones in Nigeria in terms of cultural differences in land ownership, land transfers, power of government at State and Federal levels, etc., the human factor in the family-owned land, community land and State land; human factor among civil servants processing land transaction documentations, among others. In doing all these

things listed, the reports of estate surveying and valuation firms are compulsory and there are gifted staff in valuation of assets. Such a skill is developed over time and there are specializations. The ability of sole-proprietor estate firm's readiness, at all times, to compensate for weaknesses by using staff with complementary skills through delegation of duties, was acknowledged by respondents as being recognized by sole-proprietors but not rarely acclaimed openly. Such a situation needs to be addressed since no man can know it all. On the issue of self-examination and self-development, respondents rated owners of sole-proprietor estate surveying and valuation firms very low. On developing relevant skills through continuous learning, sole-proprietors prefer to rely always on their years of experience in practice forgetting that a lot of things do change with the advancement in technology and exposure of human beings to advanced developments globally. Also, considering or remembering that strength can become a weakness in a different situation, the memories of human beings are shallow and at the same time, they are arrogant. Until the damage is done, most people fail to learn first from the past mistakes to avoid a repeat performance.

5. Findings, Conclusion and Recommendation

The findings from this study showed that:

(i). members of staff of CEOs/Founders of the studied estate surveying and valuation firms were reluctant to commenting on their employers

(ii) 75% of staff in the firms surveyed concluded that leadership succession challenges rear their ugly heads where the family members of the sole-proprietor firms are divided on the issue.

(iii) being stingy, greedy and selfish were considered very common while been too rigid on official and management issues were considered common among leadership of sole-proprietor firms.

(iv) that the crop of leaders among estate surveying and valuation firms within the study area performed poorly because they think more about the present than the future.

(v) Sole-proprietors estate firms rarely compensate for their professional weaknesses even after using staff with complementary skills through delegation of duties to achieve results.

(vi) Sole-proprietors rely always on their years of experience

in practice forgetting that a lot of things do change with the advancement in technology and exposure of human beings to advanced developments in real estate business globally

The paper concludes that to survive and remain relevant in any professionally service business during extraordinary times, the partners in each estate surveying and valuation firm need to look critically at employees age, background, educational status, job experience, if any, marital status during interviews. This is paramount because it is from these individuals that unit heads would be chosen to manage a set of clients with their varying requests, frames of mind and expectations.

The study recommends that CEOs/Founders estate surveying and valuation firms must be conscious of inevitable change in life by taking leadership succession planning seriously and by educating the family on what he expects of his firm in the future. The real estate business can only be handled by dedicated few hands, hence the reward system, in varying capacities, must be robust to retain staff and sustain their loyalty.

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Building Condition Rating of Higher Institutions in Niger State

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***Abstract*:** Immediately buildings are completed, maintenance problems start to set in, therefore maintenance needs to be carried out on them so as to sustain the performance of the buildings and keep them in good condition. Thus, with poor condition of the buildings, the main aim of the higher institution of learning will be unattainable. The study sought to rate the building conditionof6 higher institutions (using purposive sampling method) in Niger State through condition survey using condition assessment rating system and archival data from 2009-2013. Findings from the study showed that, offices and lecture halls are given more maintenance priority to hostel buildings. Electrical and plumbing problems were observed to be prevalent in all higher institutions in the last five (5) years. The building condition status of these two components, were in poor condition with a building rate of 0.49 and 0.47 respectively. All higher institutions in the study area are in fair condition. It is recommended among others that building condition survey should be carried out yearly so that areas that need timely intervention could expeditiously be maintained.

***Keywords*:** Maintenance, Buildings, Higher Institutions, Condition Rating, Niger State.

1. Introduction

Buildings are an integral part of a nation's heritage, skyline and distinct character. They are designed and built to sustain their initial functions and beauty for both the present and future users. The condition and quality of buildings in which people live, work and learn reflects a nation's well-being (Wordsworth, 2001). It is within the higher institutional buildings that future leaders, professionals and researchers are produced (Mat*et al.*, 2009). This type of building requires maintenance in order to provide a quality and favourable environment for learning, research and administrative activities within the institution (Lateef*et al.*, 2010)**.** In line with this, Akinsola*et al.* (2012) opined that education beyond secondary level is assumed to be the way to societal esteem, the key to technology, productivity and economic growth. In order for education sector in which university system is an integral

part, to achieve these outcomes, university infrastructure must adequately meet the physical needs of world-class teaching, learning and research environments (Olanrewaju, 2010). Fabiyi and Uzoka (2009) affirmed that the Federal Government of Nigeria recognizes the role of higher institutions in the production of high level human resources for the Nigerian labour market. As such, autonomy has not only been given to the existing universities, privatization or deregulation has been supported. This implies that States, private individuals and organizations are now involved in the establishment, funding and management of universities.

The population of students in higher institutions is increasing on a yearly basis, therefore, it is important to ensure that buildings are performing not only optimally but are functional throughout their life-cycles. Hence, the educational process and learning activities may be disrupted if the building performance is poor, as a result affecting the student's academic success (Khalil and Husin, 2011). However, Buys *et al*. (2009) and Zulkarnain et al. (2011) pointed out that, the effectiveness of maintenance management is below best practice in tertiary institutions. The management prefers the system of corrective maintenance instead of proactive approach and sometimes do not consider if the users are satisfied with the standard of services offered to them. A study carried out in Ghana showed that many of the public institutions in Ghana are often inadequately maintained and some of the building elements and facilities frequently show evidence of lack of maintenance and repair. Some of the office buildings of the institutions have not seen any significant maintenance or show little signs of maintenance since they were built. This lack of maintenance by the authorities and users of these facilities often leads to reduced lifespan of these buildings which invariably defeat the purpose for which they were constructed (Cobbinah, 2010). The situation in Nigeria is not in any way different from the Ghana scenario.

2. The Concepts of Building Maintenance

Building maintenance has consistently been an area of neglect of the construction industry, attracting only a tacit recognition of its importance, both within the industry and among building owners (Barrie and Peter, 2007). This manifest itself in a general lack of understanding of both its scope and its significance by all parties to the building procurement, construction and management processes. Therefore, the backlog of repair and maintenance work required to bring the country's building stock to a minimum

acceptable level continues to grow to an unacceptable rate. Recently, the dimensions of maintenance problems have increased the interest of various professional researchers to promote an awareness of maintenance. The concern over the condition of the nation's building stock has exposed more clearly the extent of the problem (Barrie and Peter, 2007).

Building maintenance is described in British Standard 3811(1984) as work done to keep a building in, or restore it to initial state or to a currently acceptable standard. The committee on building maintenance, Her Majesty's Stationary Office (H.M.S.O, 1972) defined acceptable standard (cited in Seeley, 1984) as one which sustain the utility and value of the building. This concept broadens the scope of maintenance to include alterations to a building but for the same use, conversions, which results in a change of use and value, extensions and renewal, and rehabilitation (Ikpo, 2006). In order to keep a building in acceptable condition, failures must be precluded. This implies that items that exhibit symptoms of failure have to be identified and renewed before failure occurs. This process is referred to as preventive maintenance. It depends primarily on the ability to predict the life span of all the components.

Several studies have been carried out on building maintenance especially on residential buildings in Nigeria. A good number of researches have been carried out on maintenance of educational buildings outside Nigeria. Few studies have been carried out on educational buildings but mostly on hostel facilities in the southern part of Nigeria. Adewunmi *et al.* (2011) conducted a research on post – occupancy evaluation of postgraduate hostel facilities. A user-satisfaction survey was carried out with 29 identified performance criteria. An interview was conducted to obtain first- hand information on the postgraduate facilities. Pictures were taken to further supplement survey data. Findings from the study showed that students violate hostel rules as regards maintenance culture. The study suggested that the parameters developed in the user satisfaction survey can be used as a benchmark for a new facility within the higher institutions. The study of Adewunmi *et al.* (2011) did not take into account academic buildings such as the classrooms and offices which formed the scope of this research work. The study did not consider building condition assessment as an effective qualitative and quantitative tool for assessment of buildings within the higher institutions.

3. Evaluation of Buildings

The condition of facilities in a learning environment determines the performance of the teacher's and the student's. If the facilities are inadequate or dysfunctional then the learning process will be hindered and academic productivity will decrease. Nutt and McLennan (2000) asserted that the first step to maintenance management is performance measurement since it will give direction or evidence of the improvement progress. It is paramount to evaluate the performance of educational facilities so that appropriate action can be taken to restore or retain the facilities to an acceptable standard. Olatunji (2013), reported in a research on POE exercise on the facilities of Lagos State Polytechnic, that areas of deficiency in the level of noise and conveniences can be addressed to facilitate the assessment of the overall performance of the building. Olatunji (2013) also stated how polytechnics in Nigeria can use users' feedback to formulate maintenance policy and improve on future infrastructural development in their institutions from the design stage. Nawawi and Khalil (2008) reported that building performance evaluation (BPE) is used to constantly examine the extent to which buildings are effective and efficient in meeting the needs and expectations of users. Among other functions, BPE relates clients' goals and performance criteria set by experts to the measurable effects of buildings on the users and surrounding environment (Preiser,2001). It also helps in understanding how occupants feel about their buildings, and thus provides basic information on users' needs, preferences and satisfaction (Preiser and Vischer, 2002). BPE primarily seeks to improve the quality of design, construction and management of buildings and by extension promotes sustainable built environment. Therefore, the need for BPE to be part of the research agenda of professionals in the building industry cannot be over emphasized.

In the survey carried out by Kamaruzzaman and Myeda (2013), evaluation of the performance of maintenance management is very important as it enables the maintenance managers to comprehend the strengths, weaknesses and also significance of the building services provided and also both tangible and intangible values of the building. Indirectly, maintenance managers can identify any probable threats or risks of their services. The establishment of maintenance management performance level is also beneficial for the maintenance managers to implement immediate actions to

improve the performance. It also serves as a signal that a major transformation is highly required to enhance the quality of performance. There is a positive relationship according to Kamaruzzaman and Myeda (2013), between the maintenance management systems and performance of maintenance management especially in several elements of service characteristics and building services.

Performance measurement tools include the following, but for the purpose of this study, the researchers considered the use of Building Condition Survey (McDougall *et al.*, 2002).

1. Facility Audit
2. Post occupancy evaluation
3. Balance score card
4. Benchmarking
5. Building condition survey (McDougall *et al.*, 2002).

Building Condition Survey

Building condition survey is a study and evaluation of the current performance of a building (Barrie and Peter, 2007). The survey will generally include the structure, fabric, finishes, while exposure and testing of services are not usually covered. It is an examination in whole or part to determine the current soundness and functionality of a property. This is done to ensure that the property is thoroughly examined and all defects investigated accordingly with a view to identifying if the intent of its design and construction are being realized fully or partly and to find out why if not (Barrie and Peter, 2007).

The main aim of a building condition survey is to provide data as regards the present state of an existing facility while assessing current and future maintenance needs. According to Warbington and McDonough (2008), building condition survey is carried out for the purpose of planning maintenance works (short and long term) in relation to financing, record the status of a building, technically, prior to its conversion, alteration and extension, to prepare schedule of dilapidation and repairs (its supervision and execution for proper rehabilitation to increase value of the building asset and to assess the condition of the building to enable a planned maintenance programme to be developed.

The Building Condition Index (BCI) is an index number that indicates the current condition of the asset measured relative to its 'as-new' condition (AAPPA, 2000; BC Housing, 2011; Department of Housing and Public Works, 2012). The Building Condition Index is determined by the formula;

BCI = Asset Current Condition divided by as-new condition

Table 1: Building Condition Ratings and General Description

Condition Status	General Description	Building Condition	Condition Rating (c)
Very poor	Asset has deteriorated badly; serious structural problems; general appearance is poor with eroded protective coatings; elements are broken, services are not performing; significant number of major defects exists.	0.00 to 0.19	1
Poor	Asset is in poor condition; deteriorated surfaces require significant attention; services are functional but failing often; significant backlog maintenance work exists.	0.20 to 0.49	2
Fair	Asset is in average condition; deteriorated surfaces require attention; services are functional, but require attention; backlog maintenance work exists.	0.50 to 0.74	3
Good	Asset exhibits superficial wear and tear, minor defects, minor signs of deterioration to surface finishes; but does not require major maintenance; no major defects exist.	0.75 to 0.94	4
Excellent	Asset has no defect; appearance is as new.	0.95 to 1.00	5

Source: Abbott, McDuling, Parsons and Schoeman (2007); Department of Housing and Public Works (2012)

4. Research Methodology

A building condition survey was carried out to assess the current state of buildings components in the higher institutions within the study area. Six (6) higher institutions that comprised 2 Universities (1 Federal and 1 State owned), 2 Polytechnics (1 Federal and 1 State owned) and 2 Colleges of Education (1 Federal and 1 State owned) were selected using purposive sampling technique, within which the sampled buildings for the building condition survey were drawn. This sampling technique is a non-probability sampling procedure which is usually used in qualitative research that has to do with selecting the people to be interviewed based on the interviewer's knowledge on the appropriateness and typicality of the sample selected (David & Sutton, 2004; Teddlie & Yu, 2007: 77). Eisenhardt (cited by Meyer, 2001) states that the logic of the sampling here is different from statistical sampling because the idea is to select cases that are replicable or be able to further the emergent theory. Yin (2009) suggests that 2 or 3 cases could be selected for literal replication whereas 4 to 6 cases can be used to study theoretical replication (predicting contrasting results). The academic, administrative and hostel buildings were strata

selected from each higher institution. Ten (10) buildings were then drawn from these strata within each higher institution for the building condition assessment. The buildings assessed were administrative (offices), academic (lecture halls/ theatres/ classrooms/ laboratories) and hostels. The research was carried out using a building maintenance checklist/Condition Assessment Rating System developed by Department of Housing and Public Works (2012). The checklist provided a qualitative and quantitative data relating to the building performance and condition of components. In addition to the condition survey, the records of the maintenance works carried out from 2009-2013 were obtained from the 6 institutions. These formed the basis of the conclusion reached and recommendations made. The institutions were represented by letters A-F in order to make them anonymous.

5. Results and Discussion

Table 2: Condition Rating Assessment of Higher Institutions Hostel Buildings

Building Component	A	B	C	D	E	F
Walls (Internal and External)	0.44	0.68	0.58	0.39	0.65	0.72
Floor	0.66	0.76	0.71	0.78	0.63	0.71
Windows	0.47	0.51	0.45	0.43	0.51	0.40
Doors	0.51	0.45	0.42	0.63	0.50	0.51
Plumbing	0.46	0.43	0.29	0.30	0.42	0.27
Electrical	0.32	0.33	0.39	0.37	0.28	0.38
Roof	0.59	0.77	0.51	0.63	0.60	0.50
Ceiling	0.41	0.75	0.48	0.58	0.48	0.41
Structural elements	0.75	0.76	0.75	0.75	0.62	0.75
Fittings/Furniture	0.56	0.67	0.48	0.10	0.33	0.28
External services	0.59	0.67	0.36	0.37	0.62	0.57

A and B represent the Federal and State Universities; C and D represent the Federal and State Polytechnics; E and F represent the State and Federal Colleges of Education

Table 2 showed the analysis of condition rating assessment of hostel building components in all the six (6) higher institutions. It was observed that the wall components in A, C and D had the lowest rating scores and fell within the condition status of poor. From the building condition survey, the walls were observed to have cracks, some parts of the walls were broken, wall paints were peeling, and the building façade showed neglect of

maintenance. However, the floor were found to be in generally good condition in almost all the higher institutions but was excellent in D. The excellent floors is attributed to the fact that the Polytechnic is an old institution and most of the building fabric/structures were built with durable quality materials that have been able to stand the test of time. The windows in almost all the higher institutions were found to have low condition ratings of between 0.20 – 0.49. This is as a result of student's misuse of the component and use of low quality material. However, the windows in B and E were found to have higher ratings. The condition of electrical and plumbing components had low ratings (0.20 – 0.49) in all the hostels of the higher institutions. The roof and ceilings had a low ratings of 0.20 – 0.49 as evident in A, C, and F. This is as a result of extreme weather condition and age of building as observed by the researcher during the survey. Structural fittings were in good condition in almost all the higher institutions with a condition rating of 0.75. Fittings/Furniture was in poor condition in D, E and F. This is as a result of user's misuse of the component, having a negative attitude of users and maintenance staff having to wait until emergency measures become necessary and lack of maintenance culture by maintenance staff and the users. Furthermore, the external services were observed to be poor in the two Polytechnics.

Table 3: Condition Rating Assessment of Higher Institutions Office Buildings in Niger State.

Building Component	A	B	C	D	E	F
Walls (Internal and External)	0.33	0.63	0.35	0.56	0.72	0.63
Floor	0.80	0.90	0.64	0.82	0.68	0.77
Windows	0.65	0.78	0.72	0.62	0.64	0.61
Doors	0.77	0.62	0.75	0.91	0.74	0.73
Plumbing	0.56	0.78	0.62	0.65	0.74	0.61
Electrical	0.54	0.65	0.57	0.70	0.84	0.76
Roof	0.79	0.89	0.34	0.74	0.83	0.49
Ceiling	0.58	0.66	0.31	0.65	0.75	0.59
Structural elements	0.83	0.86	0.72	0.92	0.30	0.77
Fittings/Furniture	0.72	0.78	0.64	0.84	0.74	0.74
External services	0.86	0.67	0.64	0.50	0.63	0.70

Table 3 illustrates the Condition Rating Assessment of the Institutions Office Building components. The wall components were poor in A and C. This was attributed to the problem of age of buildings in these institutions. The walls in the other higher institutions were fair with ratings above 0.55. The floors were observed to be in good condition in almost all higher institution office buildings with ratings above 0.60. All other building components were observed to be in fair and good conditions with ratings above 0.50.

Table 4: Condition Rating Assessment of Higher Institutions Lecture Buildings

Building Component	A	B	C	D	E	F
Walls (Internal and External	0.58	0.72	0.31	0.41	0.77	0.74
Floor	0.77	0.88	0.82	0.85	0.55	0.52
Windows	0.56	0.69	0.38	0.49	0.60	0.75
Doors	0.60	0.78	0.44	0.60	0.59	0.58
Plumbing	0.27	0.64	0.45	0.36	0.32	0.34
Electrical	0.45	0.74	0.33	0.41	0.33	0.43
Roof	0.74	0.95	0.60	0.80	0.80	0.60
Ceiling	0.64	0.75	0.57	0.59	0.58	0.59
Structural elements	0.80	0.86	0.97	0.88	0.55	0.73
Fittings/Furniture	0.48	0.74	0.57	0.60	0.68	0.62
External services	0.92	0.66	0.70	0.49	0.47	0.68

Table 4 shows the Condition Rating Assessment of the Institutions Lecture Building components. The lecture buildings included the classrooms, work-shop departments, laboratories, lecture theatres and lecture halls. The study revealed that electrical and plumbing components were in poor condition in five of the higher institutions which included A, C, D, E and F. This was attributed to age of building, user's overloading of electrical power outlets, fluctuations in power supply, misuse of building facilities, lack of maintenance culture by maintenance staff and the users. The electrical and plumbing components were observed to be in fair condition in B. Furniture and fittings had low condition ratings of between 0.45 – 0.60 in A and C. The external service in A is in excellent condition with a rating of 0.92, while D and E had the lowest building condition ratings which were due to management related factors such as top management not interested in maintenance of the external environment and services, and also negligence on

the part of the maintenance staff towards maintenance.

Table 5: Average Condition Rate of Components of Building Types in the Six (6) Higher Institutions in Niger State.

Higher Institutions	Building Rate	Condition Rate	State of Buildings
Hostel Buildings			
B	0.61	3	Fair
A	0.52	3	Fair
E	0.51	3	Fair
F	0.50	3	Fair
C	0.49	2	Poor
D	0.48	2	Poor
Office Buildings			
B	0.74	3	Fair
D	0.72	3	Fair
E	0.69	3	Fair
A	0.67	3	Fair
F	0.67	3	Fair
C	0.57	3	Fair
Lecture Buildings			
B	0.76	4	Good
A	0.62	3	Fair
F	0.60	3	Fair
D	0.59	3	Fair
E	0.57	3	Fair
C	0.56	3	Fair

The analysis in Table 5 explains the Average Condition Assessment of Building Components of Building Types in the Six (6) Higher Institutions in Niger State. The scale of building condition rating was in accordance with Abbott *et al.* (2007); Department of Housing and Public Works (2012). The study discovered that the hostel buildings in A, B, E and F were in fair condition and were rated 0.61, 0.52, 0.51 and 0.50 respectively; while the hostel buildings in C and Dwere in poor condition with building ratings of 0.49 and 0.48. The study however, found out that the condition rating of office buildings were in fair condition and had building ratings between 0.65 – 0.75. Furthermore, the state of lecture buildings in B

was found to be in good condition with a rating of 0.76, while the lecture buildings in other higher institutions are in fair condition with ratings of between 0.55 – 0.65.

Table 6: Average Rate of Building Types in Higher Institutions in Niger State.

Type of Buildings	Average Building Rate	Overall RII
Offices	0.68	1
Lecture Halls	0.61	2
Hostel	0.52	3

Table 6 showed the Assessment Ranking of Building Types in all Higher Institutions in Niger State. Office buildings ranked first with an average rating of 0.68, followed by lecture halls (0.61) and lastly Hostel buildings (0.52). It was clearly evident from the building survey that offices are given more priorities than hostel buildings. It should be noted that more of the users (students) utilize the hostel buildings and are the major purpose why the higher institution exist. The office buildings were investigated to have better appearance than the hostels buildings. The building façade of A, C and D hostels showed neglect of maintenance.

Table 7: Ranks of Condition Rating of Building Components in Higher Institutions

Components of building	Overall building rate	Building condition status	Rank
Structural elements	0.77	Good	1
Floor	0.74	Fair	2
Roof	0.70	Fair	3
External services	0.64	Fair	4
Doors	0.62	Fair	5
Fittings/Furniture	0.59	Fair	6
Ceiling	0.57	Fair	7
Windows	0.57	Fair	8
Walls (Internal and External	0.57	Fair	9
Electrical	0.49	Poor	10
Plumbing	0.47	Poor	11

From the analysis in Table 7, structural elements in all six (6) studied higher institutions were observed to be in good condition and ranked first. Floors, external services, doors, fittings/furniture, ceiling, windows and walls are in fair condition. Electrical and plumbing components are in poor condition and therefore ranked

amongst the last two, with ratings of 0.49 and 0.47 respectively. These two components are the most used components and are very essential. Khalil*et al.* (2012) supported this claim that students' academic achievements are hindered if the buildings they live in experience poor performance conditions. The electrical problems observed in this study stem from inadequate routine maintenance, fluctuations in power supply, overloading of electrical outlets, poor workmanship and users misuse of electrical fittings. Plumbing problems also affect the users and causes health problems for them. The poor electrical and plumbing components were further substantiated with the radar diagram analysis in this study.

Table 8: Overall Ranking of Building Condition Assessment According to Federal Higher Institutions in Niger State.

Higher Institutions	Overall Average Building Rating	Building Condition Status	Overall RII
A	0.62	Fair	1
F	0.59	Fair	2
C	0.54	Fair	3

The analysis above gives the Overall Ranking of Building Condition Assessment according to Federal higher institutions. The study revealed that A ranked first (0.62), followed by F (0.59) and lastly C which has the lowest rating of 0.54. C had the lowest rating, due to the fact that the buildings though having a good structural background from the survey carried out, lack maintenance on the building façade and some of the components which have been in use since it was built and are now out-dated. The building survey finally concluded that the overall building condition status for all three (3) Federal higher institutions are in fair condition but need effective maintenance practices to improve condition status of the buildings.

Table 9: Overall Ranking of Building Condition Assessment According to State Higher Institutions in Niger State.

Higher Institutions	Overall Average Building Rating	Building Condition Status	Overall RII
B	0.72	Fair	1
D	0.61	Fair	2
E	0.59	Fair	3

Table 9 shows the overall ranking of building condition assessment according to State higher institutions in Niger State. The state higher institutions' maintenance works are funded by the State government of Niger State. B has a better maintenance practice as compared to D and E due to the fact that B responds to maintenance needs before they become worse. The two Colleges of Education had the same ratings as both institutions were constructed around the same time and maintenance practices in both institutions are somewhat similar.

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Occurrence of maintenance works carried out from year 2009 – 2013 in the six (6) higher institutions in Niger State

The result of maintenance works carried out for a period of five years from 2009 - 2013 are presented in the radar analysis in Figure 1.

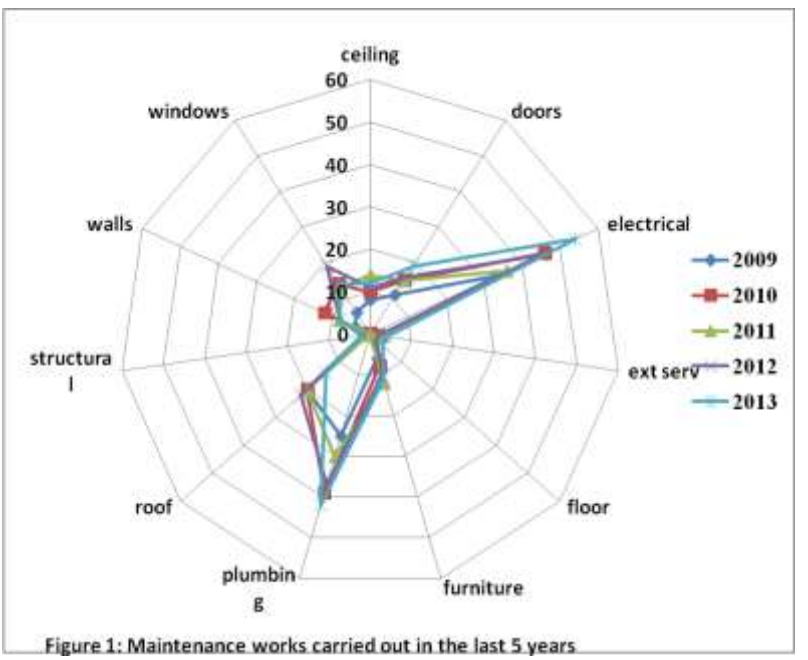

Figure 1: Maintenance works carried out in the last 5 years

Figure 1 is a radar diagram illustrating maintenance works carried out from the year 2009 to year 2013 as obtained from the maintenance records of the Works and Maintenance Departments of the institutions studied. The apex of the arrow at 55 showed that electrical component has the highest number of most occurred problems that have been carried out in the higher institutions. Next in line was plumbing problems which had its apex at 44. This two major maintenance works as shown in this radar diagram result further substantiate the building condition survey result as shown in Table 7.

Conclusion

The study concluded that the state of hostel facilities in higher institutions in Niger state was poor, while that of offices and lecture hall buildings were in fair conditions. Electrical and plumbing components were found to have the most occurring maintenance problems. Offices and lecture halls are given more maintenance priority to hostel buildings. The study recommended the following:

1. Yearly building performance measurement by the Quantity Surveyor, using a building condition survey or post occupancy evaluation (user satisfaction survey) can be carried out on all academic and hostel buildings, which will aid in detecting maintenance problems on time and consider the type of maintenance to adopt and planned funds to execute maintenance works.
2. Electrical and plumbing problems need to be given more maintenance attention as they directly affects the performance of the staff and students.
3. The building façade and external environment of some of the higher institutions need to be improved upon to improve the image of the institutions.

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Empirical Determination of Co-operative Housing Intervention Methods in Lagos Metropolis

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Abstract: As a result of the diverse challenges that the masses faced in the procurement of housing from the public and private sector housing market, many people had turned to seek assistance through the organized informal sector, especially the co-operative society. This study explored Co-operative Societies intervention in housing provision with the ultimate aim of establishing empirically the different methods of meeting housing needs of their members in Lagos State. Ikeja Area office, having the highest number of institution based Co-operative Societies in Lagos Metropolis was purposely selected for the study. Thus structured questionnaires were administered to two groups of respondents, the principal officers of the selected 54 institution based co-operative societies together with their 315 members. Secondary data were also collected through the review of relevant publications and records of some of these societies. Primary data analysis was carried out with tables, percentages and relative importance index while independent sample t-test was used to find if there is any statistical significance between the opinion of the principal officers and members on the success rates of the methods of housing provision engaged by the co-operative societies. The study found that amongst others that both categories of respondents have similar opinion on the method of housing provision commonly engaged with housing development loan (corporate scheme) ranking first, followed by land acquisition, documentation, layout and allocation, private housing project loan, then land acquisition, documentation, development and allocation with complete house purchase (universal) trailing behind. The study also revealed that most co-operative societies generate their funds and hardly receive financial assistance from external sources. The study concluded by suggesting a model that would incorporate external assistance from government, non-government and parent institutions and as well synchronize the various methods to make deliver a wholesome housing acquisition process for members of institution based co-operative societies.

Keywords: Institution-based, Co-operative Societies, Housing provision, Methods, Co-operators,

1.0 Introduction

Over the years, the dominance of government and profit-oriented private sector in the housing market has produced housing that could only be afforded by the high end users but beyond the reach of the middle and low

income segment of the society. Even at that, the supply of housing units by these two major players could not match the surging demand across the ranks of income earners in Nigeria. Different studies had shown that housing deficit in Nigeria had been on the increase over the years while the Federal Ministry of Lands, Housing and Urban Development (FMLHUD) succinctly put the shortfall at 17 million housing units (FMLHUD, 2012). As a result, many had turn to seek assistance towards their housing procurement through the organized non-profit informal sector prominent amongst of which is the Co-operative Society. Hence, one of the solutions being explored is co-operative housing, through the co-operative societies. Co-operative housing according to Co-operative Housing Federation (CHF)-International (2004) is an alternative housing approach that combines the system of co-operative practices and methods with the principles and process of housing development to provide housing for its members. According to the United Nations (2002), "Co-operative Societies support social cohesion and stability and give life to the concepts of corporate responsibility and citizenship. They provide essential services, ranging from housing to health care that strengthen community development". This medium of housing delivery has been applied and has recorded significant success in countries like Italy, United Kingdom, Zambia, Sweden, Philippines, Denmark, Norway, Canada and South Africa (Danmole 2004; Daramola, 2006; and Gezzard, 2007). Nubi (2006) observed that Co-operative Housing contributes 45% to the housing stock in Estonia, 22% in Czech Republic, 16% in Norway and 10% in Germany.

In Nigeria, the idea of Co-operative Societies intervention in housing provision was embraced by the people and the government. According to Wahab (1998), Co-operative housing is not new in Nigeria while Gbadeyan (2011) observed that Co-operative Societies have become more popular and viable in the development of housing market in Nigeria and has brought all round improvement in the standard of living of the people although the author did not show empirical evidence to justify this assertion. Vanguard (2012), reported that the National Council of Lands, Housing and Urban Development recently adopts seven housing delivery models for mass housing development in the country among which co-operative is one. However, the escalating crisis in the housing sector clearly indicates that majority of the Nigerian populace comprising mainly the low and

medium income have not yet found a viable means of tackling the issue thereby necessitating a re-examination of the effectiveness of the different options the methods of housing delivery offered through co-operative approach. Ojo and Bello (2008) and Adedeji and Olotuah (2012) observed that loan granted by the co-operatives is grossly insufficient to execute the housing projects and that most co-operative members could not access finance and as a result, could not complete their housing projects. Kareem, Arigbabu, Akintaro and Badmus (2012) also observed that the major way by which co-operative societies increase co-operators capital formation is by granting credit services and the problem mostly faced by co-operative societies in Nigeria is the problem of capital. Thus finance as well as insufficiency or inappropriateness of housing provision method was identified as a critical challenge confronting co-operative societies' housing provision. This study therefore empirically investigates the methods of housing provision by the co-operative societies, identified the sources of co-operative finance and establishes the use of loan disbursed to members.

2.0 Review of Literature

2.1 The Co-operative Societies

The International Co-operative Alliance (ICA) defined Co-operative Society as "an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise". Co-operative Societies has emerged as an option explored by majority which are mostly low income group and are somewhat alienated by the privileged minority. According to Ahmad-Bello (2005), co-operatives have emerged to be a strong, vibrant and viable economic alternative in a period when many people feel helpless, powerless or disenfranchised to change their living conditions. Co-operatives are formed to meet basic common needs based on the idea that together, a group of people can achieve goals that none of them could achieve alone. Although, there is no consensus as regards the origin of co-operative, most account agrees that modern co-operative movement is traceable to the Equitable Pioneers of Rochdale Society (EPRS) in 1844. Abell (2004) and Gibson (2005) opined that Rochdale is seen as the first modern co-operative from where co-operative principles were developed. Abell (2004) further averred that by 1863 more than 400 British co-operative associations, modeled after the Rochdale Society, were in

operation even as the model grew steadily and become the model for similar movements worldwide. World membership in International Co-operative Alliance (ICA) gives an idea of the size of the co-operative movement. In 1895, the founding congress had 194 members; in the mid-1980s the ICA recorded a membership of about 355 million individuals; in 1999, the organization represented 750 million people; and since 2002 it was estimated that more than 800 million people are members of worker, agriculture, banking, credit and saving, energy, industry, insurance, fisheries, tourism, housing, building, retailer, utility, social and consumer co-operatives societies (Levin, 2002; Encarta, 2005).

2.2 The Co-operative Housing

Across the world, co-operative medium has been explored to confront the increasing menace of housing need among the people. The United Nations (2002) recommending the medium, posit that "c*o-operatives support social cohesion and stability and give life to the concepts of corporate responsibility and citizenship. They provide essential services, ranging from housing to health care that strengthen community development.*" Unlike the government and profit oriented private sector, co-operative method of housing provision places more emphasis on end users' participation from the commencement of the process. This is made possible based on the principles and values that govern operation and activities of co-operative societies. Co-operatives are autonomous, self-help organizations controlled by their members. They enter into agreements with other organizations, including governments, or raise capital from external sources on terms that ensure democratic control by the members and maintain their co-operative autonomy. The society also organizes education and training for their members, elected representatives, managers, and employees so they can contribute effectively to the development of their co-operatives. The Co-operative Housing Federation (CHF)-International (2004) thus defines Co-operative housing as an alternative housing approach that combines the system of co-operative practices and methods with the principles and process of housing development to provide housing for its members. Efforts directed at meeting housing objectives of co-operative members have resulted in the use of different strategies depending on the objective, financial capacity and level of assistance received. Consequently, different types of strategy intervention in housing provision have been

observed among the co-operatives.

2.3 Methods of Housing Provision by the Co-operative Societies

Generally, co-operative Societies adopt different methods in an attempt to meet the housing objectives of members based on the nature, focus or purpose of the society. In the developed countries, these methods have been broadly grouped into four, achieved by altering the basic legal and finance structure to suit the organization objectives. First, the market rate or equity co-operatives where members do not own a specific piece of property, but a share of the co-operative corporation that owns the estate. Members thus have a binding long-term lease to occupy a specific unit in the estate (NCF, 2003). Members are also permitted to sell their shares at full market values thereby accruing a market rate of return. However, the housing unit occupied reverts to the corporation once the shares are sold. Second, a limited equity co-operative that meets housing needs of members by combining the equity contribution of co-operators with grant or subsidy from supporting institution to provide housing units for its members (NCF, 2003). However, a limit is placed on the maximum resale prices of co-op units in order to maintain long-term co-op housing affordability and retain the value of any public subsidy that may have been used in financing the creation of the co-op. Third is the leasing co-operative. A leasing co-operative takes a long lease from an investor, a landlord or non-profit organization and operates the building collectively as a co-operative. This arrangement is a hybrid of rental and co-operative where members do not have ownership stake in the estate but only enjoy access to inexpensive building and reduced operating costs. The arrangement could also provide an option to buy at the end of the lease term (NCF, 2003). The fourth category is the mutual housing association which is a non-profit corporation set up to develop, own and operate housing. Generally, the association is owned and controlled by the residents of the housing produced. According to Bliss (2009), strong co-operative and mutual housing sectors exist in various countries across the world. The Commission on co-operative and mutual housing defines mutual housing organization as one which enables residents, through having the right to become members, to control or participate in governance and to exercise control over their housing environment, neighbourhood and community (Bliss, 2009).

In Nigeria, co-operatives societies meet the housing need of members in a number of ways. According to Adedeji and Olotuah (2012), such methods include model housing construction similar to government housing schemes, granting of house building loans, direct construction of housing units which are allocated to members at subsidized rates, acquisition of land for members, processing of land and building documents and procurement of building materials. Yakubu, Salawu and Gimba (2012) also highlighted what is achievable through housing co-operatives as housing units, plots of land, housing loans, processing of building and land documents and procurement of building materials. Thus, co-operatives aides members' home acquisition wholly, partly or gradually depending on the objectives, focus and financial capacity of the society. The concept of market rate, limited equity and leasing are not common in the Nigerian context possibly because of the level of sophistication of the economy. This study further probed the extent of use of the methods identified with a view to identifying the factors hindering their usage and improving on them.

2.4 Sources of Finance for Co-operative Societies

The enormous size of capital required for procuring housing for individuals who are largely financially incapable on their own is the major reason for seeking alternative sources of finance. Co-operative societies' approach is therefore being explored as an alternative method of housing finance. However, financing housing project through this medium transcends providing soft loan to set up or keep businesses afloat, procure goods and services at subsidized rates or meet emergent need of members as it is practiced by many multipurpose co-operative societies. Cost of housing development comprises the costs of land, infrastructure, title and building plan processing, physical planning permit, building construction materials, labour procurement, professional expertise, finance cost and the commonly unnoticed opportunity cost of making the choice. In many developing countries, particularly Nigeria, each of these items is capital intensive and has compelled majority of households to build incrementally, thereby taking long period before the house could be completed. Co-operative Societies' approach therefore attempts to achieve two things for members, first is to make housing procurement more affordable by procuring each or all of these items at wholesale or

subsidized prices and second, to significantly reduce the period of housing delivery. Although, Co-operative Societies either commit pooled financial contributions of members to procure each or all of these items, or rely on their membership strength as an organized (corporate) entity to harness government and non-government support, the availability and adequacy of these efforts is not very clear and is empirically examined in subsequent section. Olotuah (2007) had earlier observed that Co-operative Societies have very effective methods of generating funds both from within and outside their members and regardless of whether housing provision constitutes the primary objective of the society, fund raised could be used to provide or facilitate housing procurement for the members. It is expected that if the Co-operative financing approach had been effective and adequate, most if not all of their members should have possessed their houses.

3.0 Research Methods

This research was carried out in Lagos State, being a State with the highest population in Nigeria and the epicenter of housing crisis in Nigeria. Although, there are 15 Administrative Area offices of Co-operative Societies in Lagos State, Ikeja Area Office which has the highest number of co-operative societies and the highest number of institution based co-operative societies was purposely selected for this study. The total number of co-operative societies under Ikeja Area Office is the 185 Co-operative Societies with a total number of 34,484 members. This was derived from the Lagos State Directory of Co-operative Societies,(2011).The institution based co-operative societies under Ikeja Area Office were purposely identified as the sample frames for the study and these were97 in number with membership size of 21,504. A sample size of 54 institution based co-operative societies was arrived at by proportional estimation using an Anonymous model (2015) gotten online for determining sample size. This sample size has a membership capacity of 9,073 members. The sample size for the members was further selected by the application of Yates' (2006) model for sample size determination thus giving a sample size of 383 for the members. Therefore, questionnaires were distributed to 54 principal officers and 383 members of the institution based co-operative societies in Lagos Metropolis. Data were collected on the structure of the Co-operative Society, strategy for housing provision, method of raising finance, adequacy or otherwise of external support as well as the level of achievement and challenges. Data were

analyzed with descriptive statistical tools such as frequency, weighted average, relative importance index and presented with tables, charts and graphs.

4.0 Data Presentation and Analysis

4.1 Response Pattern

The pattern of response as obtained from both the principal officers and the members are presented in Table 1. Questionnaires were administered to one principal officer of each of the fifty-four co-operative societies and a total two hundred and thirty-four (234) co-operators altogether.

Table 1: Response Pattern

Respondent Group	Questionnaires distributed	Questionnaires Retrieved	Response rate
Principal Officers	54	42	78%
Members	383	234	61%
Total	437	276	63%

Table 1 shows the rate of response from the two study groups, that is the principal officers and the members. The Table shows that 42(78%) of the 54 principal officers contacted responded to the questionnaire while 234 which represent 61% out of the 437 members also responded to the questionnaires. The overall response rate which is 63%, representing the 276 responses from the 437 respondents was therefore deemed sufficient to make reliable conclusion on the subject being investigated.

4.2: Profiles of Respondents

Table 2: Profiles of respondents

No	Profile variable	Principal Officer	Members	Total (%)
1	Marital Status: Single	-	25	25(9)
		42	209	251(91)
	Married	42	234	276 (100)
	Total			
2	Education Qualification:			
	O'Level	-	-	-
	Diploma (OND/HND)	4	37	41 (15)
	First Degree (B.Sc/B.A)	32	178	210 (76)
	Higher Degrees	6	19	25 (9)
	Total	42	234	276 (100)
3	Employment Sector:			
	Private Sector	31	159	190 (69)
	Public Sector	11	75	86 (31)
	Self employed	-	-	-

	Total	42	234	276 (100)
4	Years of Working:			
	1-5	-	47	47 (17)
	6-10	11	93	104 (38)
	11-15	23	70	93 (34)
	above 15 years	8	24	32 (12)
	Total	42	234	276 (100)

Table 2 showed the profile of the two categories of respondents, the principal officers and the members of the Co-operative Societies. Respondents were requested to provide information on four key areas that depict their understanding of questions asked and their ability to provide correct and adequate reply. The four areas are the marital status, education qualification, employment sector and years of experience. The table revealed that 91 percent were married while 9 percent are not yet married. This implies that majority of the respondents would actually be experiencing the pressure to have their own home which would ultimately trigger the drive to own one. The table also showed that the entire respondent has acquired educational training and are literate enough to comprehend and answer reasonably. About 15 percent have minimum of diploma, 76 percent possess first degree while 9 percent have acquired postgraduate degree. The Table further showed that 31(74%) of the Co-operative Societies are from the private sector establishment while the remaining 12 are from the public sector establishment. Moreover, 190 (69%) of the members are from the private sector while 86(31%) are from the public sector. This implies on one hand that private sector employees are more than the public sector employee in the State and that both the private and public employees are facing similar financial challenges in procuring their housing units and have made co-operative societies as a way out of the financial predicament. Finally in this section, questions were asked in respect of the years of working experience. Response showed that 17% of members have up to 5years experience, 38 percent have between 6 and 10years experience, 34 percent have between 11 and 15years experience while 12 percent have above 15years working experience. In essence, all the respondents are qualified, capable and literate enough to provide information on the subject being investigated.

4.3 Sources of Co-operative Funds and Use of Loan

Presented in Table 3 are responses to sources of Co-

operative Societies' funds and use of loan obtained by the Co-operators. The Table showed that the principal sources of Co-operative Societies' fund are members' contributions, subscription fees, interest on loan, occasional charges and return on investments, fixed deposits and profits. Other options such as voluntary donations, government sources and parent organizations hardly contribute to co-operative purse. This clearly indicated that most co-operative societies in the study area are limited to the size of capital base they could muster from the collective efforts and investments.

Table 3: Sources of Co-operative Societies' Fund and Use of Loan

Characteristics	Determinant variable	Frequency	Percentage (%)
Sources of finance	Members contributions	42	100
	Voluntary donors	4	9.5
	Parent organizations	0	0
	Government	0	0
	Non-governmental organizations	0	0
	Investments	26	61.9
	Development/occasional charges	21	50
	Enrolment/subscription charges	42	100
	Interest on loan	42	100
	Profits	42	100
	Fixed deposits	42	100
Use of loan	Acquire complete housing unit	-	-
	Purchase and Survey of land	194	83
	Process of title and building plan	54	23
	Procure building materials	190	81
	Foundation work	70	30
	Shell housing	140	60
	Roofing	45	19
	Finishes	14	6

Furthermore, enquiries were made as to know the use of loan granted to members. From the response, all the respondents indicate that they grant loan for diverse housing purposes ranging from land purchase, title and building plan processing, foundation work, construction work, roofing and finishing. None of the respondent indicated that they acquire and allocate completed housing units for their members. The table showed that no member spent the loan on acquisition of complete housing unit, 194(83%) use the loan to acquire and carry out survey of land, 54(23%) used the loan to process title and building plan, 190(81%) use the loan to procure building materials, 70(30%) spent the loan on foundation, 140(60%) spent it on construction, 45(19%) spent the loan on roofing, 14(6%) spent on finishes.

4.4 Housing Provision Methods by Co-operative Societies

Table 4 shows summary of responses regarding prevailing intervention methods in housing provision and the method currently being applied in the study area from the perspectives of both the principal officers and members of the co-operative societies. Both views were sought in order to establish the truth via authentication using statistical means.

Table 4: Housing Provision Intervention Methods by Co-operative Societies

Mechanisms	ExcPersp	Rank	MembPersp	Rank
Equity Rate System	0 (0.0%)	8	0 (0.0%)	6
Ltd Equity System	0 (0.0%)	8	0 (0.0%)	6
Model Housing Scheme (GvtSchm.)	5 (12%)	6	0 (0.0%)	6
Housing development Loan (Corp.Schm)	42 (100%)	1	234(100%)	1
Private Housing Project Loan	38 (91%)	3	94 (40%)	3
Land Acquisition, Doctn, Layout &Allocn	18 (43%)	4	112 (48%)	2
Land Acquisition, Doctn, Develop &Allocn	11 (26%)	5	35 (15%)	4
Complete House Purchase (Universal)	3(7%)	7	7 (3%)	5
Building Materials Procurement & Dist.	40 (95%)	2	112 (48%)	2

Key

GvtSchm> Government Scheme — Corp. Schm> Corporate Scheme
Doctn> Documentation — Allocn> Allocation
ExcPersp> Executive Perspective — MembPersp> Members Perspective

A discreet study of the table shows that there are nine methods identified from literature [Sazama & Wilcox 1995); Danmole (2004); Ojo & Bello (2008); Odum & Ibem (2011); Adedeji & Olotuah (2012; Yakubu, Salawu & Gimba (2012) and Adeboyejo & Oderinde (2013)] namely equity rate system, limited equity system, model housing scheme (Government Schemes), housing development loan (Corporate Scheme), and private housing project loan. Others include land acquisition, documentation, layout and allocation, land acquisition, documentation, develop and allocation, complete house purchase (universal) and building materials procurement and distribution. Of these nine methods, two are not being used in the study area and they are equity rate system and limited equity rate system. Their non-adoption might be due to lack of understanding of the system or because the equity systems are not permitted or operated by Nigerian Stock Exchange. It could also be seen from the Table 4.4 that on the face of it the views of the two parties responding differ necessitating the need to carry out independent sample test (Gamble, 2001) on the views to establish whether there is significant difference between the

two views or the two views are the same.

In order to interpret the result and make valid conclusion from the T test, a null hypothesis was set thus:

Ho_1: There is no statistical significant difference between the opinion of the principal officers and members of co-operative societies on the mechanisms of housing intervention.

Table 5: Testing Statistical Significant Difference in the Opinion of Principal Officers and Members on Co-operative Housing Intervention Mechanisms.

Dependent (Test) Variable	Independent (Grouping) Variables	N	Sig.	T	Df	Sig. 2-tailed	Mean Diff.	Std Error Diff.
			Equal variances assumed					
Housing Provision Mechanisms	Principal Officers	126	.103	1.489	1756	.137	.33120	.22237
	Members	1,632						

*Equal variances assumed **95% confidence interval of the difference

Table 4.7 shows the calculation. With the Sig. value of .103, equality of variance is assumed.

The t statistic under the assumption of equal variances has a value of 1.489 and degree of freedom (df) value of 1756 with an associated sig. (2-tailed) value of .137. Since the sig. value of .137 is greater than .05, the null hypothesis which states that there is no significant statistical difference between the opinion of principal officers and members of co-operative societies on the method of housing provision, is accepted. Based on this result, the views of the members who are the beneficiaries and who feel the pinches are taken to be more representative of the happenings in the field. That means hierarchically, one can authoritatively say that the most common method of intervention in housing provision by co-operative societies in the study area are housing development loan (corporate scheme), followed by land acquisition, documentation, layout and allocation, private housing project loan, then land acquisition, documentation, development and allocation with complete house purchase (universal) trailing behind.

5.0 Results and Discussion

The objectives of this paper were to empirically investigate the methods of housing provision by the co-operative societies, the sources of co-operative funds and the use of loan obtained by members of the co-operative societies. These three objectives were distinctly addressed in Table 3 and 4. It was revealed in Table 1 that the principal sources of co-operative societies' fund are

internal sources such as investment, member's contributions etcand only 9.5% could muster financial assistance from voluntary donors.. By implication, most of the Co-operative Societies depend on funds generated from member in form of their regular contributions, subscription fee, return from investments, interest on borrowed funds and occasional charges. This however points to the fact that co-operative efforts would be limited to what the capital base could support per time and individual access to loan from the societies would also be limited. In the second part, the methods adopted by the Co-operative Societies for meeting housing needs of the members were examined with a view to ascertaining the extent of their involvement in housing provision. The result revealed that out of the nine methods of co-operative societies housing provision methods identified, only seven were familiar or being used within the study area while the market rate and limited equity are not being engaged. The level of usage was further investigated from the perspective of the principal officers and the members and to further find out the differences in their ranking of the use of the methods, an independent sample t-test was carried out. The result of the test revealed that the t statistic under the assumption of equal variances has a value of 1.489 and degree of freedom (df) value of 1756 with an associated sig. (2-tailed) value of .137. Since the sig. value of .137 is greater than .05, the null hypothesis which states that there is no significant statistical difference between the opinion of principal officers and members of co-operative societies on the method of housing provision was accepted. Based on this result, the views of the members who are the beneficiaries and who feel the pinches are taken to be more representative of the happenings in the field. That means hierarchically, one can authoritatively say that the most common method of intervention in housing provision by co-operative societies in the study area are housing development loan (corporate scheme), followed by land acquisition, documentation, layout and allocation, private housing project loan, then land acquisition, documentation, development and allocation with complete house purchase (universal) trailing behind.

The multiple choice response of Table 4 showed that many of the Co-operative societies engage more than one approach at a time and while 12% offer wholesome package similar to model housing scheme, no member subscribed to the method. This implied that the cost, terms or conditions of using

this method could not be met by the members. Moreover, while some Co-operatives Societies grant loan for various housing acquisition purposes, some goes further to process title for members, engage in direct construction, procure building materials or engage contractor or builders' services. A major deduction here is that Co-operative approach has been helpful for incremental building among members of the Societies. This is much reflected in part 3 which investigate the use to which loan procured from the Co-operative pool is used for. While no member indicates purchase of complete housing unit, different members indicate that they spent the loan on financing different stages of the housing development process. It is observed that majority spent the money on land acquisition, procurement of building materials and construction of shell building, while others spent on foundation, roofing and finishes as well as plan processing.

6.0 Recommendations and Conclusion

A major deduction from this study was that most Co-operative Societies in the study area rely mainly on internal sources of generating revenue and that no one received financial assistance from government, non-governmental organizations or financial institution to boost their financial base and increase their capacity to provide finance for members. It was further revealed that no Co-operative Society is actually committed to ensuring each member eventually own a housing unit within a specified time frame as eventual ownership is dependent on individual member's effort and ability to raise the required capital at each stage of the development process. It is therefore suggested that there is need for collaboration and partnership between the Co-operative Societies, non-government organizations and financial institutions in the country to improve the financial capacity of the Co-operative Societies and ultimately that of members. Moreover, government should come in to strengthen Co-operative Societies that support housing acquisition objectives of their members by making available assistance at various stage of the development process. Co-operative Societies is an important means of providing houses for the members as it begin with end users, end with them and eliminate third party (profit oriented private sector) that promote affordability challenge. It is also suggested that government could encourage building development among Co-operative Societies by providing infrastructure such as road, drainages, streetlight, water and electricity at the site of the Co-

operative Societies at no cost to these societies. This would go a long way to encourage members to concentrate their finance on developing their housing units and finish it on time without carrying the burden of providing infrastructures on the site.

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Influence of Socio-Economic Factors of Residents of Informal Settlements on their Choice of Waste Disposal Method: Evidence from Lagos, Nigeria

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***Abstract*:** This paper investigated residents in a representative informal settlement located in Lagos, Nigeria. It sought to determine whether residents' socio-economic characteristics influence their choice of waste disposal method. Based on literature reviewed twenty socio-economic variables were selected and subjected to standard multiple regression using SPSS version 20. Results revealed that the model comprising of the socio-economic characteristics investigated explained only14% of the variance in choice of household waste disposal methods. The findings thus suggest that the socio-economic characteristics of residents in the study area, collectively and individually, contributed very little in their choice of waste disposal method. Only six of the variables, namely number of households sharing same building with respondents (.001); number of children below eighteen years (.004); employment structure (.004); income (.014); number of wives of household heads (.016); and house type (.037), made statistically significant unique contributions to explaining the choice of waste disposal method by residents in the study area. The number of households sharing same building with respondents contributed the strongest with standardized beta coefficient of -.149 followed by number of children below eighteen years (-.125), employment structure (-.109) and income (-.107). The fact that the socio-economic factors accounted for 14 percent of the variance in choice of waste disposal method implies that some other factors account for residents' choice of waste disposal methods. Nevertheless, variables like number of households sharing same building with respondents, number of children below eighteen years, employment structure and income need to be carefully considered in evolving strategies for household waste disposal in informal settlements like Ayobo, Lagos.

Keywords: Choice of waste disposal method, Informal Settlement, Nigeria, Socio-economic factors, Waste disposal method

1.0 Introduction

The way urban areas generate and manage their wastes has been identified as a major challenge for not only the relevant authorities in these cities but also other stakeholders. In 2008 for instance, the waste generated in Lagos was

put at 9,000 metric tonnes per annum which has risen to a current rate of 10,000 tonnes per annum (Ogunbiyi, 2015). Apart from the additional expenditure stress on inadequate financial resources, effective waste management also requires substantial outlay of equipment and human resources. Success is further enhanced when households complement the efforts of statutory authorities by adhering to stipulated regulations. Inadequate waste management especially in informal settlements poses serious threats to the environment in the form of environmental degradation and pollution which affect the health, quality of life and overall productivity of residents. It is in realisation of this that the Lagos State government in Nigeria has promulgated a law which among other things stipulates the waste disposal method to be used by all residents in the State. Unfortunately, some residents continue to dispose household wastes in ways that are unacceptable. This paper investigates the impact of socio-economic characteristics in the choice of waste disposal methods by residents of informal settlements in the State with a view to refining and articulating effective and sustainable waste disposal policies. Although several studies have been carried out on waste management in developing countries, their focus have been on the formal urban setting with only very few targeting informal settlements. Such studies have investigated waste management related issues like generation, composition, management strategies and the social, economic, technical and health implications of waste management. Very little focus has been given to identifying the socio-economic factors that determine choice of waste disposal methods by households in informal settlements. This paper is therefore novel as it intends to fill this gap in literature and in the process provide policy makers empirical data on which to formulate waste management strategies, especially as it pertains to household waste disposal in informal settlements.

2.0 Review of Literature

2.1 The concept of waste and waste management

Although waste and its management has been a major concern and the focus of several studies and intellectual discuss, there is not yet a consensus on a universal definition of waste. Wastes are the byproduct of human activities (Bamigboye, 2003). According to the Oxford Advanced Learner's Dictionary, waste refers to something that is no longer useful and therefore is to be disposed of or thrown away. Oyeniyi (2011) opine that waste is any material that has been used

and is no longer wanted. Also waste has been referred to as useless remains or anything that is considered useless or of no value to its owner (Bamigboye, 2003). Adenrele (2014) views it simply as 'what we refuse to use'. From the foregoing, it can be seen that waste is conceived as anything that is worthless, without value, not needed, a nuisance that needs to be discarded or thrown away. It can also be inferred that waste is person specific, implying that what may be considered as waste by one person may indeed be seen as useful by another (Williams, 1998). Consequently, Matsuto (2002) opined that definition of waste which includes Municipal Solid Waste (MSW) should be left to each nation. Wastes can be classified according to source to include municipal wastes; industrial wastes; agricultural wastes; construction and demolition wastes; and commercial and institutional wastes (Opeyemi, 2012). Conversely, it could be classified according to its state as gaseous, liquid and solid wastes (UN Habitat, 2010). A major constituent of municipal wastes is household waste generated from domestic activities. The focus of this paper is solid component of household waste. According to Babayemi & Dauda (2009) solid wastes are essentially "non-liquid and non-gaseous products of human activities, regarded as being useless". The literature shows that solid household wastes constitute of garbage, rubbish and large waste from homes (Gobo and Ubong, 2001). Isirimah (2000) provides a more elaborate classification which includes food wastes, paper, cardboard, plastics, textiles, leather, yard wastes, wood, glass, tins, cans, aluminum, rags, beddings, sweepings from buildings and old furniture.

Over the years, however, the concept of waste and its management is changing. While waste is increasingly seen as a resource in the wrong place (Abdullahi, Jiriko and Akunna, 2011), waste management is viewed in terms of resource recovery. Consequently, waste management has been operationalised in the literature to include the collection, transportation, recovery, and disposal of waste, including the supervision of such operations and after-care of disposal sites (Jerie & Tavera, 2014). The current concept of waste management thus emphasizes recovery while encouraging reduction, reuse and recycling of wastes. It also ensures that due diligence is applied to the collective process of sorting, storage, collection, transportation, processing, resource recovery, recycling and disposal of wastes (Abila & Kantola, 2013). This is in contrast to the traditional definition of waste management

as the organized and systematic channeling of waste through pathways to ensure that they are disposed of with attention to acceptable public health and environmental safeguards (Kofoworola, 2007; Yaaba, 2012). As observed by Ojewale (2014) the disposal of solid waste is the ultimate stage in solid waste management system, thus this paper is concerned with the socio-economic factors that determine how households choose to dispose of their household wastes.

As noted by Ojewale (2014), households in different contexts have adopted different methods in disposing wastes arising from their domestic activities. In some cases, combinations of methods have been relied upon. In a developed country like Switzerland the standard waste disposal methods used include recycling (which may involve reuse of used products, recovery of raw materials from waste and transformation of waste to materials of lower quality than the initially used material), incineration, chemical-physical and biological treatment and landfill. These are similar to waste disposal methods used in the UK and other parts of the world which the UK Department of Environment, Food and Rural Affairs identified to include landfill incineration anaerobic digestion pyrolysis gasification composting. In developing countries like Nigeria, waste disposal methods are less sophisticated and have been articulated by Ojewale (2014) to include collection by public refuse collection vans, private waste managers and cart pushers, use of designated and incidental open spaces, dumping of waste into drains during and after rainfall, on river banks, roadsides, burning, burying and use of uncompleted buildings, vacant lands. Although waste management is an issue of concern to all urban residents, its associated problems of environmental degradation, threats to life, safety and wellbeing, are more obvious and severe in slum areas and informal settlements.

Reasons for the choice of these methods, though not major issues for several of the literatures, have been tangentially addressed. Adenrele's (2014) study which investigated refuse disposal behaviours among rural and slum residents in Lagos, Nigeria, identified poor planning and the huge population of the city as factors that may have influenced choice of waste disposal methods among the residents. Adewole (2009) found inefficiency of the public waste management operators and the poor attitude of residents as factors influencing the way residents dispose of their wastes. In addition, Abila & Kantola (2013) attributed

determinants of choice of waste disposal methods to include inadequate information on waste management benefits, lack of residents' involvement in formulation of waste management strategies and poor implementation of government policies. The study further identified poverty, poor governance, urbanization, population growth, poor standards of living; low level of environmental awareness and inadequate management of environmental knowledge. Elaborating further, the study noted that income status could limit households' choice thereby promoting methods that are considered unacceptable. According to Longe, Longe, **&** Ukpebor (2009) the perception by residents that waste management ought to be a social service also affects the manner they dispose of wastes. According to Ojewale (2014) choice of waste disposal methods have also been influenced by factors such as characteristics of waste to be disposed, cost consideration, availability of disposal site, cost of labour, and technical implication of methods of disposal. Literature also suggests that the socio-economic characteristics of households could affect their choice of waste disposal methods (Kayode & Omole, 2011; Onwuemele, 2015). According to Ifegbesan (2010) females have consistently been found to be more environmentally conscious than men. This view is supported by others like Raudsepp (2001) although van Liere & Dunlap's (1981) earlier study did not find gender a significant predictor of environmental concerns and attitudes as other socio-demographic variables. In the same vein, Chanda (1999) found that while environmental concerns among residents studied differed due to educational and income levels, age and gender did not appear to have any significant influence.

3.0 Materials and Methods

3.1 The Study Area

The study which forms the basis for this paper was carried out in Ayobo, Lagos, Nigeria between November, 2011 and March, 2012. Lagos was chosen because it is one of the cities currently experiencing the challenges of high rate of urbanisation in the world. With an annual growth of 6-8% and an estimated population of about 18 million inhabitants, Lagos is one of the fastest growing cities in the world (Olubori, 2011). Lagos is presently burdened by the challenges of over 200 informal settlements. Ayobo is the largest of these informal settlements and considered representative of informal settlements in Lagos. A peripheral settlement on the border between Lagos and Ogun

States, Ayobo is currently undergoing the processes of consolidation and expansion. Waste management is a major challenge in Lagos with consequences felt more significantly in the informal areas. The waste generation per capita is put at 0.5kg/person/day (Olubori, 2011). This is comparable to the 0.5kg/person/day reported for India (Annepu, 2012). Over the years, the monthly State recurrent expenditure budgetary allocation has risen from 2.5% in 2005 to 12% in 2011(Olubori, 2011). In order to ameliorate this challenge, the Lagos State government has experimented with several strategies aimed at improving waste management process in Lagos as a whole. These efforts have been well documented by studies like Akiyode & Sojinu (2006). Of interest to this paper, however, is the current strategy which relies on the participation of private entrepreneurs in waste collection from the points of generation (in our particular place, the households) and transportation to the dump sites. It is mandatory for residents to patronize these private sector participants (PSP) operators only as other methods of waste disposal have been outlawed. Currently there are about three hundred (300) PSP operators in Lagos State. The services of the PSP operators are paid for by households based on a fixed rate determined by location and type of dwelling **(**Longe, Longe & Ukpebor**,** 2009). It does appear that the PSP strategy was adopted without the input of residents. Consequently, residents are constrained to patronize the operators where they do not have alternatives. Those who can circumvent the regulation continue to use other methods

3.2 Study Approach

The survey research method was adopted in collecting data. The main instrument for quantitative data collection was a structured questionnaire designed to collect relevant information from respondents. These included residents' personal characteristics, housing tenure, processes of accessing housing and housing quality. Twenty variables presented in Table I which capture residents' socio-economic characteristics were identified from literature and investigated. Selection of respondents was done in stages. Using available maps which were updated based on reconnaissance visits, occupied houses in the area were numbered and every 8^{th} house was selected. Respondents consisting mainly of household heads were thereafter randomly selected from the houses. Out of a total of 1,200 questionnaires administered to respondents, 1,055 were retrieved for analysis, representing 87.9% response rate.

Trained field assistants were used in administering the questionnaires. Where necessary, field assistants helped to interpret the questions to local dialects for respondents or fill the questionnaires. Schedules for field work were flexible and targeted periods when residents were more likely to be at home. Questionnaires were analysed using SPSS version 20 software package. Data were subjected to standard multiple regression so as to determine extent of their contribution to choice of waste disposal method by respondents. Data were screened to ensure they did not violate the assumptions of normality, linearity, multicollinearity and homoscedasticity. To determine the percentage contribution of the model generated by SPSS, the R^2 value was multiplied by 100. However to determine the percentage unique contribution of each variable, their Part Correlation Coefficients were squared and subsequently multiplied by 100.

Table I: List of variables investigated

S/no	Variable	Group
1	sex of respondents	**Respondent's characteristics**
2	age of respondents	
3	attained level of education of respondents	
4	employment structure of respondents	
5	monthly income of respondents	
6	other income earners in the household apart from respondent	
7	number of household members when household moved to the house	
8	number of people currently in the household	
9	number of wives of male respondents	
10	number of children in the household under 18 years	
11	marital status of respondents	
12	ethnic group of respondents	
13	religion of respondents	
14	current tenure status of respondent	
15	type of house occupied by household	**Dwelling characteristics**
16	number of bedrooms occupied by respondent's household	
17	number of other households sharing the same building with respondent	
18	residence prior to current residence	**Respondent's residential history**
19	length of stay in Ayobo	
20	length of household stay in house	

4.0 Results

The questionnaire was pre-tested and reviewed based on the feedback obtained from pilot survey. The essence of the pre-testing was to ensure that the results of the study are validated and reliable.

4.1 Residents' Characteristics

Results presented in Table II reveal that respondents were more of males (53.7%) and fell within the active working ages of 25 – 60 years (86.7%). Although only 4.6% of them reported having no formal education, majority of the others attained low to intermediate educational levels. While 19.9% had primary education, 33.7% and 25.9% had attained secondary and Ordinary National Diploma (OND) education. About 51.8% of respondents were self-employed though 22.4% reported being retired and 6.0% claimed to be unemployed. Data shows that about 32.4% of respondents earned less than the minimum wage of N17,000:00 or had no income. Majority of the respondents (54.7%) were low or medium income earners with incomes ranging between N17,000:00 and N100,000:00. Both initial and current household sizes were low consisting of one to four persons. Data reveals that large households of over eight persons decreased from 14.0% when respondents first moved to their houses to 6.2% as at the time of survey. With regards to dwelling attributes, Table III shows that majority of respondents lived in the rooming house type (40.0%) although significant proportions lived in self-contained flats (34.3%) and single family houses (24.1%). Majority of respondents were renters (62.6%) while 66.8% had either one or two bedrooms in multi-family houses. Results also show that respondents indicated they disposed of their household wastes by patronising the government mandated waste management operators, PSP operators (71.0%). The rest dispose of wastes in ways that are prohibited by government.

Table II: Respondents' Socio-economic characteristics

Respondents' Characteristics	Percentage (%)
Gender	
Male	53.7
Female	46.3
Age (Years)	
>25	9.3
25 - 40	32.6
41 - 50	40.6
51 - 60	13.5

61 -70	2.7
<70	1.2
Marital status	
Single	14.7
Married	79.9
Once married	5.5
Highest educational attainment	
No formal education	4.6
Primary	19.6
Secondary	33.7
Ordinary National Diploma (OND)	25.9
First degree (HND, BSc., B.A.)	12.5
Post-graduate	3.7
Employment status	
Retired	22.4
Self-Employed	51.8
Wage Earner	15.2
Unemployed	6.0
Others	4.7
*Monthly income (naira)**	
No income	.9
<N17,000:00	31.5
N17,000:00 - N40,000:00	36.2
N41,000:00 - N100,000:00	18.5
N101,000:00 - N250,000:00	7.0
>N251,000:00	5.9
Current household size (persons)	
1-2	26.0
3-4	30.7
5-6	21.0
7-8	8.3
<8	14.0
Initial household size (persons)	
1-2	34.4
3-4	31.8
5-6	17.9
7-8	9.8
<8	6.2
Number of children in the household under 18 years	
none	21.2
1-2	38.7
3-4	23.4
5-6	10.7
7-8	2.7
9-10	2.3
<10	1.1
Number of wives of male household heads	
1	75.7

2	16.3
<2	8.0

*1USD = N209:00 as at 23/08/15
Source: Author's fieldwork

Table III: Dwelling Attributes

Attributes	**Per cent (%)**
Type of house occupied	
Self-contained flat	34.3
Single family house	24.1
Rooming house	40.0
others	1.6
Number of bedrooms occupied	
one	32.8
two	34.0
three	14.1
four	3.9
five	4.0
six or more	11.3
Current tenure status of respondents	
renter	62.6
owner-occupier	29.7
family house	6.1
Others including rent free	1.7
Method of household waste disposal	
PSP	71.0
Burning	23.8
Burying	2.0
tossed into field, river or vacant plot	1.9
Others	1.3
Number of households sharing building with respondents	
none	15.5
one	8.4
two	23.7
three - four	18.7
five - six	8.8
seven - nine	12.8
ten or more	12.1

Source: Author's fieldwork

4.2 Socio-economic Determinants of Residents' Choice of Waste Disposal Methods

Based on the literature, twenty socio-economic variables presented in Table 1 were identified which could affect the choice of waste disposal method by respondents in the study area. These were entered as independent variables in a regression analysis carried out to determine the variance in choice

of waste disposal method explained by these variables collectively and individually. Choice of waste disposal method was the dependent variable. Preliminary analyses were conducted to ensure that the data did not violate the assumptions of normality, linearity, multicollinearity and homoscedasticity. The independent variables showed some relationship with the dependent variable. Correlation values between the independent variables ranged from .024 to -.223 revealing a rather weak relationship. Collinearity diagnostics also revealed that tolerance values ranged from .375 to .894 which is above .01, thus indicating absence of multicollinearity. Also, the variance inflation factor (VIF) values were all found to be below 10, ranging from 1.12 to 2.67. This also suggests that the assumption of multicollinearity was not violated. Furthermore, inspection of the normal probability plot (P-P) of the regression standard residual showed points with minimal deviation from the straight diagonal line from bottom left to top right. Similarly, the scatterplot revealed only a few outlying residuals. In addition, the standard residual values shown in the case wise diagnostics ranged from 3.057 to 5.496 which fall outside the unacceptable range of 3.0 to -3.0. This indicates that the sample studied is normally distributed.

Further examination of results revealed an R^2 value of .140 indicating that the model of this regression analysis explains only14% of the variance in choice of method of waste disposal by residents in the study area. The model reached statistical significance (sig. = .000) which means that p< .005. The coefficient table was also examined to determine the variables in the model that contributed to the prediction of residents' choice of waste disposal method. The variable, "number of other households sharing the same building with respondent" exhibited the highest standardized beta coefficient of -.149 indicating that it made the strongest contribution to explaining the residents' choice of waste disposal method, when the variance explained by all other variables in the model is controlled for as shown in Table 4 (column 2). The beta coefficient values for the other variables ranged from .008 (initial household size) to .125 (number of children in the household under 18 years), indicating the varying levels of their unique contributions. However as can be seen from Table 4 (column 3), only six of the variables made statistically significant unique contributions. These include number of households sharing

same building with respondents (.001); number of children below eighteen years (.004); employment structure (.004); income (.014); number of wives of household heads (.016); and house type (.037). It can be inferred from the foregoing that the contribution of the other fourteen variables investigated were not statistically significant since they had values above .05.

Furthermore, the part correlation coefficients were examined to determine the individual unique contributions to the total variance in the dependent variable by the independent variables showed that values ranged from -.006 (initial household size) to -.112 (number of other households sharing the same building with respondent) as shown in Table 4 (column 4) . In order to establish the percentage of the total variance in the choice of waste disposal method by residents in the study area and how much of the value of R^2 would drop if it was not included in the model, the part correlation coefficient values were first of all squared and subsequently multiplied by 100. The unique contributions of the independent variables ranged from .004% for initial household size to 1.254% for number of other households sharing the same building with respondent as presented in Table 4 (column 5).

Table 4: Results of regression analysis on socio-economic factors influencing choice of waste disposal method

s/no	Independent variable	Standardized Beta Coefficients	Sig.	Part correlation coefficients	unique contribution of variables
1	No. of other households sharing same house with respondent	-.149	**.001**	-.112	1.254
2	number of children in the household under 18 years	-.125	**.004**	-.101	1.020
3	employment structure of respondents	-.109	**.004**	-.099	.980
4	monthly income of respondents	.107	**.014**	.085	.723
5	number of wives of male respondents	.092	**.016**	.083	.689
6	type of house occupied by household	.078	**.037**	.072	.518
7	residence prior to current residence	-.068	.062	-.064	.410
8	length of stay in Ayobo	-.067	.233	-.041	.168
9	religion of respondents	.062	.094	.058	.336
10	No. of bedrooms occupied by respondent's	-.058	.203	-.044	.194
11	length of household stay in house	.056	.321	.034	.116
12	attained level of education of respondents	.052	.212	.043	.185
13	sex of respondents	.051	.162	.048	.230
14	ethnic group of respondents	-.046	.206	-.044	.194
15	marital status of respondents	.043	.277	.037	.137
16	age of respondents	.036	.382	.030	.09
17	current tenure status of respondent	-.016	.682	-.014	.020
18	number of people currently in the household	-.014	.805	-.009	.008
19	other income earners in the	-.009	.828	-.007	.005

20	household household size when it moved to the house	-.008	.871	-.006	.004

5.0 Discussion

The first focus of this paper as earlier stated was to determine the socio-economic characteristics of residents that influence the choice of domestic waste disposal methods by households in the informal settlement of Ayobo, Lagos. From the analysis carried out it can be seen that residents' socio-economic characteristics contributed only 14% of the total variance in the choice of method of waste disposal by households in the study area, Ayobo. The individual contributions of the socio-economic variables studied ranged from .004 to 1.254, contributing only 7.28% when summed up. This indicates that there exists a lot of shared variance among the independent variables. It is thus worthy to note that either individually or collectively the socio-economic variables contributed only marginally to decisions of households as to which waste disposal method to adopt. The main implication of the findings here is that there exist other factors which are not socio-economic in nature that determine the choice of waste disposal methods by households in the study area.

The second focus of the paper was to determine the unique contributions of each of the socio-economic characteristics/variables studied. Results revealed that only six of the twenty variables made significant unique contributions to the model of choice of waste disposal method by households. These are number of households sharing same building with respondents; number of children below eighteen years; employment structure of respondents; income of respondents; number of wives of male household heads; and the type of house occupied by respondents. These findings suggest that these are the main socio-economic areas of concerns to residents in the study area while deciding on the method of waste disposal to adopt. These variables can be grouped into two categories: variables that determine quantity of waste generated (number of households sharing same building with respondents, number of children below eighteen years and number of wives of male household heads) and variables that determine households' capacity to pay for waste disposal (employment structure of respondents, income of respondents and type of house occupied by respondents).

Findings on the socio-economic characteristics of residents (Table 2) revealed that only 21.2% of households did not have children

below eighteen years of age while about a quarter of the married male headed households were polygamous. Also only 15.5% of respondents did not share their buildings with other households (Table 3). While the household size and its composition to a large extent determine the volume of waste generated by a household, the number of households in a building determines the volume of waste generated per building. This becomes important where disposal of household waste is managed collectively as was the case in many of the multi-family houses in the study area. When such issues are not properly resolved, it can lead to conflicts between households. For households in single occupation there is more latitude of choice as they do not need to consider the opinions and interests of other households. Household income to a large extent is a function of the employment status of heads of households, especially where there are no other income earners or additional income earners in the household do not contribute to household expenditure. Household income will also likely determine the type of dwellings residents occupy as well as how much the households are willing to pay for waste disposal services. This is bearing in mind that the waste disposal methods used by households have varying cost implications. Thus, poor households that are unable to meet basic household needs will expectedly be unwilling to commit scarce resources to waste disposal if they have less expensive options.

A closer look at the data suggests that residents with higher household sizes tended to dispose waste using other means other than PSP. In fact, most of the residents (83.3%) with 4 persons and above in the household burnt, tossed or buried their waste. This was probably a function of the volume of waste generated by the households coupled with the irregularity of collection by PSP operators. It is also interesting to note that most of those residents of the informal settlements who earned less than 40,000 Naira monthly patronized PSP operators. The same was the case with residents that earned above 100,000 Naira monthly. Most of the residents that earned between 40,000 and 100,000 Naira disposed their wastes by burying, burning and tossing. A further look at the data show that many of the residents that earned less than 40,000 lived in rented apartments, where it is mandatory to contribute to engage PSP operators for waste disposal. Most of the residents that earned between 40,000 and 100,000 Naira were however owners of their buildings, which were mostly at the early incremental stages of construction. This

category of residents designate a portion of their still-developing sites as waste dumps or pits and treat those spaces as appropriate by burning or covering up, respectively. It would therefore appear that the choice of waste disposal method is a function of the affordability, volume of waste generated, the residency rules and the availability of alternatives, which is a function of the type of house occupied.

The findings reported here are supported by Kayode & Omole (2011) and Onwuemele (2015) who investigated some Nigerian cities (notably Ibadan and Benin City). These studies found that socio-economic characteristics of residents like age of respondents, household size, income of respondents, types of dwelling places and property status affected choice of waste disposal by households. However, unlike this current paper the previous studies did not determine the actual value of contribution of the socio-cultural variables either collectively or individually. Thus this is one of the contributions of the current paper towards provision of empirical data to enhance formulation of appropriate waste disposal strategies in cities especially informal settlements.

In addition, the fact that the socio-economic variables investigated accounted for only 14% of the variance in the data probably suggests that there are other factors outside the scope of this study, which would account for the remaining variance in the data. For instance, respondents suggested that the accessibility of waste disposal methods partly influenced their choices. These could be a subject of further studies.

6.0 Conclusion

The ever increasing global concern on environmental health demands that wastes be properly managed and disposed of in the most environmental friendly and acceptable way. Choice of waste disposal methods plays a significant role in this regard. This paper has examined residents of an informal settlement Ayobo, Lagos in order to determine the underlying socio-economic factors influencing their choice of methods of disposing household wastes. The results indicate that socio-economic characteristics of residents (either collectively or individually) in the study area have had marginal influence in households' choice of waste disposal methods. Nonetheless, the six determinant factors identified in this paper are germane and need to be taken into consideration in evolving sustainable strategies for household waste disposal in the informal settlements of Lagos. The fact that the results suggest that the choice of waste disposal method is a function of the

affordability, volume of waste generated, the residency rules and the availability of alternatives, may have implications for policy. Residents may need to be educated on the health risks and environmental hazards that result from burning and burying the wastes. Authorities responsible for waste management may also consider options that make these residents, who are concerned about the cost of disposing waste, make money from their wastes, such as the waste to wealth initiative. The implication of this is that there is need to explore recycling of wastes in earnest. The fact that socio-economic characteristics of residents only marginally account for variances in choice of waste disposal also suggest the need for further studies to determine the other factors that determine residents' choice of methods they adopt in disposing their domestic wastes.

Although this paper has relied on data from Ayobo, Lagos, Nigeria, the conclusions drawn from it have the propensity for wider application. This is because despite the undeniably context specifics of informal settlements, they broadly exhibit similar characteristics which can form the basis for adaptation of the findings of this paper.

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Forms of Mortgage Valuation Inaccuracies and Implication on Real Estate Development Finance in Nigeria

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***Abstract*:** Pledging of collateral is a necessary requirement for loan advancement, lenders grant loan based on forced sale value of collateral. Earlier studies on valuation inaccuracy in Nigeria established that valuation inaccuracy is prevalent in the country. It was also established that valuation inaccuracy pose threat to real estate finance in Nigeria. This study examines the forms of valuation inaccuracies in Nigeria and their implications on real estate development finance. The study populations are: Valuers, Developers and Banks. Questionnaires were administered to the study populations to sample their opinion on the most prevalent valuation in accuracy in Nigeria and the implication of valuation inaccuracy on real estate development finance in Nigeria. Descriptive method of statistics and relative importance index were employed for the analysis. It was discovered that overvaluation is the most prevalent form of valuation inaccuracy in the study area and the implication of overvaluation is that it put lenders at risk. Also, the implication of undervaluation is that it denies borrowers the required amount needed for property development. The risk associated with overvaluation make lenders to take different measures that consequently impede accessibility of loan for real estate development purpose. Recommendations were made on how to improve the quality of the services rendered by Estate Surveyors and Valuers in order to reduce rate of valuation inaccuracy in Nigeria.

Keywords **-** Mortgage, Valuation, Inaccuracy, Estate Development, Finance, Nigeria

Introduction

Real Estate investment requires huge amount of money which is rarely available to developers. Therefore, developers result to credit facilities granted by financial institutions. Availability and accessibility of credit has been frequently described as the most important factor in real estate development. However, property valuation of collateral is fundamental to banks or financial institutions lending decisions (Lovell and French, 1996). Financial institutions usually require pledge of collateral for loan advancement and credit is granted based on the value of the collateral pledged. Therefore,

valuation is necessary to ascertain the value of collateral pledged for loan advancement. As a result of the importance of valuation to loan advancement, it became imperative for valuation reports to accurate and consistent.

Ajibola (2010) posited that poor property valuation has a domino effect and can lead to corporate financial crises, which can in turn result in severe crisis within national economies. The effect of a poor valuation on mortgage assessment cannot be over emphasized. It leads to valuation inaccuracy which consequently negatively affects the mortgage institution in securing loan granted. Aluko (2004) revealed that Estate Surveyors and Valuers in Nigeria are not interpreting the property market with high degree of accuracy which is obtained in the developed countries. Ojo (2004) in another study, lend credence to Aluko's submission by stating that there were complaints from financial institutions on the accuracy and reliability of mortgage valuation figures supplied which they considered under representing values of foreclosed collateral security.

Previous studies on valuation accuracy were able to assert that valuation inaccuracy is a common phenomenon in developed and developing nations. In the United Kingdom, researchers such as Hager and Lord (1985), Matysiak and Wang (1995) and Hutchison et al (1995) were able to establish the presence of valuation inaccuracy in valuation exercise in the country. Also in Nigeria, scholars such as Ogunba (1997) who due to absence of data resorted to the approach of requesting thirty Lagos based practicing estate surveying and valuation firms to carry out valuations of two residential properties earlier sold located at Victoria Island and Ikoyi respectively. The valuation estimates subsequently arrived at by the valuers was subjected to a number of statistical tests such as range, inter-quartile range, mean deviation and regression/correlation analysis was able to show that valuations were not a good proxy for market prices due to the following reasons: the average variance between valuations and prices was far in excess of his adopted margin of error of +/-5 %, the intercept in the regression equation was statistically distinguishable from zero and the slope statistically distinguishable from 1;and third, the range and inter-quartile ranges were unacceptably wide. In addition, other scholars like Aluko (2000), Adegoke (2008), Ogunba and Iroham (2008) were able to establish presence of valuation inaccuracy in Nigeria.

Ayedun et al (2012) asserted that question about accuracy and

consistency in valuation practice has been subject of interest to the academicians, professionals and users of valuations not only in Nigeria or developing countries but also in the developed countries of the world such as UK, USA, Canada and Australia. The scholars, employed survey method in conjunction with interview of members of Nigeria Institution of Estate Surveyors and Valuers in practice and academic institutions in Lagos Metropolis, to study the factors contributing to inaccuracy and variance in valuation estimates. The study revealed lack of market data, poor educational background and lack of experience as the causes of valuation inconsistency and inaccuracy in the study area.

Valuation inaccuracy can be in form of over-valuation or under-valuation (Mallinson and French 2000). The causes of these two forms of valuation inaccuracies are enormous ranging from Valuers negligence and client influence. Hoffman (2005) established that over valuation is the major cause of sub-prime mortgage crisis experienced in the United State of America. Similarly, between 1991 and 1996, when the number of distressed banks in Nigeria increased from 7 to 57 out of the 115 banks (NDIC, 2002), the situation was said to be partially caused by delinquent loans and inaccurate value judgment (Aluko,2004). Idowu et al (2012) posited that scholars have generally discovered that clients have been disappointed at the figures they were advised by different valuers. The scholars attributed wideness in the opinion of values and inaccuracy as the causes of the disappointment. In the light of this, this study wishes to examine the most prevalent form of valuation inaccuracy and implication on real estate development finance in the study area.

Valuation Accuracy in Nigeria: Methodology and Findings

From the 1980's, literary (albeit non empirical) comments began to be made on the accuracy of valuations in Nigeria. A past President of the NIESV, Udo-Akagha (1985) in his foreword to the first edition of the Guidance Note on property valuation posited that "there ought to be reasons why two or more valuers, valuing the same interest in a property for the same purpose and at the same time should not arrive at the same or insignificantly different results if they make use of the same data and follow the same valuation approach. But very often this is not usually the case and in some of these unfortunate cases, the profession is thrown into considerable embarrassment"

The above quotation captures the growing concern among valuers

and their clients at the same time. Estate Surveyors and Valuers were faced with increasing allegations of wide variations in the valuation estimates supplied them. Similar comments was made by Igboko (1992) who while researching into the investment method of valuation in Nigeria, at the instance of NIESV, observed what he described as a "weak grasp of valuation" amongst the valuation practitioners. He came to conclusion that many of the investment valuations conducted were actually "mis-valuations and guesstimates". He did not however provide any credible empirical statistical basis to justify his conclusion.

Ogunba (1997) undertook an empirical step at addressing the question of accuracy and variance in investment valuations in Nigeria using Lagos metropolis as the study area. In the absence of data base of property valuations and sales, he resorted to the approach of requesting thirty Lagos based practicing estate surveying and valuation firms to carry out valuation of two residential properties earlier sold located in Victoria Island and Ikoyi respectively. The result of the empirical study showed that valuations were not good proxy for market prices.

On the other hand, Aluko (2000) carried out an accuracy study on a larger scale with a focus on mortgage valuations and subsequent sale prices of such mortgaged properties used as collateral securities. In his study, bank records of mortgage valuations conducted by fifty nine (59) estate firms in Lagos metropolis were examined. The sale prices of the properties were compared with their earlier valuation estimates and analyzed by means of regression/ANOVA. He came to a conclusion that valuation in Nigeria are a good proxy for price and that despite the anecdotal evidence to the contrary, the mortgage valuers are doing a very good job of price prediction. Although the study sample size is larger than that in Ogunba and Ajayi (1998) study, the size is considered small for drawing generalizable conclusion in addition, the sale prices of collaterized properties adopted for cross-checking the result of the prior valuations were forced sale values which do not meet the definition of open market value.

Ogunba (2003) expanded the coverage area of accuracy studies to a consideration of property valuation estimate and sale prices in the state of south western Nigeria. The approach adopted in the study was similar to the one adopted in his earlier work. A total of 171 estate and valuation firms which constituted 75% of the sample of sample frame of estate surveying and valuation firms were employed for the

study. The author confirmed his earlier work that valuation estimate were no good proxy for sale prices and that valuation estimate of one firm was not good proxy of other firms. The study also extended to an examination of the causes of valuation inaccuracy under topics such as the conduct of valuation, educational and practice structure and valuation industry etc.

Adegoke (2008) investigated valuers behavior in Nigeria when valuing properties in localities that they lack substantial prior experience in Nigeria. He sampled 122 estate surveying and valuation firms in Lagos metropolis. He used quasi-experimental and survey methods for the study. The researcher employed simulated valuation method in carrying out valuation of a single commercial office property located in a city that the participants/respondents were not familiar with. The study revealed a wide variance of valuation outcome from the mean which showed that the valuation outcomes were not reliable.

Babawale (2008) in his study identified valuers knowledge and experience, valuation approach and individual characteristics of valuation firms as the most significant contributors to the problem of inaccuracy of residential property valuation in the Lagos metropolis. Data for the study was gathered from 250 firms of Estate Surveyors and Valuers. The analysis was done by a combination of descriptive and inferential statistics including factor analysis and correlation/ regression analysis.

Ayedun (2009) examined accuracy and consistency of investment method of valuation in Lagos metropolis. He sampled the opinion of 127 estate surveying and valuation firms, the 25 mega banks and 132 institutional property companies all in Lagos state. The findings showed that valuation estimates were neither good proxy for realized sale prices of real properties nor proxy for valuations of other firms. Empirically, he came up with an acceptable margin of error (+/-10.2%) as agreed by the sampled stakeholders (estate surveyors and valuers, banks, property companies and courts amongst others) and he confirmed that valuers in Lagos metropolis were not operating within the margin.

In the United Kingdom, valuation accuracy (or inaccuracy) debate was triggered off by Hager and Lord (1985)'s work wherein they conducted a small sample survey of ten Surveyors who were invited to value two properties. In one case the range of valuations was +/-10.6% and in the other, it was +/-18.5% suggesting a relatively low level of valuation accuracy relative to the +/-5% benchmark adopted. Brown (1985) conducted a larger and

much more rigorous study on a sample of 29 properties for which there were transaction prices and recent prior valuation figures. In the study, independent valuation firms were made to carry out the valuations of the subject properties. Both valuations and sale transactions took place between 1975 and 1980. In addition, both the valuations and the sale transactions were based on the RICS definition of Open Market value, which excludes special purchases, forced sales etc. The author used regression analysis to compare valuation estimates and sale prices on the 29 sampled properties. The scholar was able to established high level of valuation accuracy.

To a large extent, the studies have confirmed the existence of valuation inaccuracy using various methodology and approaches. It has been established more often than not that valuations in Nigeria are not good proxy for transaction prices. The interlink between valuation and real estate finance have variously been mentioned in passing but no in-depth evaluation of the impact of inaccuracy in valuation on real estate finance was conducted in any of the studies. Inaccuracy in valuation impact on finance differently depending on which form (over or undervaluation) is identified but none of the studies available attempted to find out which form of inaccuracy is most pronounced and its effect on finance. While the present work looks in this direction, it also attempts to identify the mitigating measures adopted by lenders to cushion the effect of valuation inaccuracy.

2.6 Valuation Accuracy as a Real Estate Loan Requirement

Ajayi (2003) noted that increased valuation accuracy and consistency are the demand of the more sophisticated and enlightened clients in the emerging property market of today and the property market has seen remarkable changes within the past forty years. Europe and the United States have witnessed the emergence of institutional investors, the management of investment on portfolio basis and the recent advent of new property finance methods including securitization and unitization. Clients are now getting much more sophisticated and analytical in their decision making approaches and therefore increasingly require more accurate and consistent valuation estimates from their consultant valuers.

The real value of security is one of the most important elements, if not the most important in real estate finance. For this reason, the appraisal of real property as a security for loan plays a central role in real estate finance (Wooley, 1994). However, as the importance of the role of appraisal

increases, so do the harmful effects of appraisals which do not accurately reflect the true value of the subject property.

Appraising is, by its nature, an imperfect science. An appraisal must consider several variables and make several assumptions when determining the value of real property. Thus, valuations are often only highly educated estimate of the value of the subject property. The result is that one can never know for certain whether an appraisal is "inaccurate" because there are few benchmarks for determining the accuracy of the appraisal. Yet when an appraisal is "inaccurate", the consequences of relying upon that appraisal can be severe. This lack of accuracy inherent in producing a valuation report is the primary weakness in the appraisal industry (Wooley, 1994).

Accurate and reliable valuations serve an increasingly important function as a decision making tool (TienFoo, 2002). They are essential not only in loan origination context, but in broader realm of the public perception of and confidence in a nation's property investment related institutions and industries. By way of credence, Babawale (2006) mentioned that a prerequisite for reliable measurement of the absolute or relative performance of commercial property investments is that valuation provides a reliable proxy for transaction prices. While accurate and reliable valuations could significantly contribute to the financial well-being of the clientele, faulty and fraudulent valuations have seriously damaged, and/or contributed directly to the insolvency of several financial institutions and real estate investors (Wooley, 1994). By providing wrong signals to participants, inaccurate valuation will also erode confidence in the operation of property market and jeopardize the future of the property industry which leads in the long run to mis-allocation of resources and distortions in the property market (Babawale, 2006).

Ajibola (2010), said with the establishment and multiplicity of industrial and commercial economic activities and coupled with prime role property holdings play especially as collateral for the release of production of capital funds, the corresponding role of valuation, as the basis for transaction figure, should not be compromised.

The appraisal report is one of the most important documents in a loan file because it supports the underwriter's determination of whether there is sufficient and appropriate collateral to back any mortgage transaction.

Beyond mortgage loan, a real estate investor may wish to dispose of its land, building or

both to use the proceed realized to fund a new real estate project and therefore, professional advice may be sought to have an accurate assessment of the property in order to determine the prevailing market price. Valuation may as well be required to determine the value of a proposed project to determine the rental value for the purpose of forward letting or sales in order to attract finance.

In most, if not all sources of real estate development finance, valuation is required at one point or the other as a pre-requisite for measuring the absolute or relative performance either by the project financier or the developer as it (valuation) is expected to provide reliable proxy for prices (Bowles, 1999) upon which investment decision is taken.

However, where valuation is thus inaccurate, the appraised value creates a credit risk because the loan-to-value ratio is understated or overstated and the collateral may not adequately support the finance transaction. In declining markets, the possibility of overvaluation increases, which makes it even more critical to use current market data. It is important to thoroughly review the appraisal report and make sure that the appraised value is credible and fully supported by the information analysis provided within the appraisal report.

2.7 Causes of Valuation Inaccuracy

Hudclips (2007) mentioned that accuracy in valuation depends on the quality and adequacy of supporting data and the degree of proficiency with which the data items are analyzed. Incorrectness or inaccuracy of valuation as noted by Wyatt (2003) can enter into valuation process at any stage from inception. According to Hudclips (2007), valuation inaccuracy results from various sources such as: Misconception of the objective and purpose for which valuation estimation is made, Lack of judgment and experience, Haste and carelessness, inadequate data or data of poor quality, Incorrect interpretation of data, Incorrect method of valuation, Faulty application of correct method, Influence on appraiser

The valuation process as we are aware requires gathering, analyzing and interpreting a great volume and variety of data. Inaccuracy may occur where an appraiser fails to exercise necessary caution by merely corroborating a predetermined unsupported conclusion. Also, because the necessary data are gathered piecemeal a valuer out of mistake, may assign greater importance to some of the data than they are rightly entitled to receive, thus reaching a conclusion which is premature and unsound.

As emphasized by Babawale (2006), the list of potential reasons for inaccuracy in commercial valuation is inexhaustible owing to its complex nature. He also pointed out factors and circumstances commonly identified as contributing to the disparity between valuations and subsequent transaction price, some of which were also emphasized by Hudclips in the list. Others reasons mentioned by Babawale (2006, 2008) include: Nature of property market, Valuation assumptions, Integrity of individual valuers; and Type of property amongst others.

2.10 Implications of Valuation Inaccuracy on Real Estate Funding

The two possible forms of valuation inaccuracies are overvaluation and undervaluation (Mallinson and French, 2000). Overvaluation implies that an appraised value is inflated and the collateral may not support the transaction, thereby creating a credit risk if relied upon (Freddie Mac, 2009). Where the opposite is however the case (i.e. undervaluation) it implies an over protection of the provider of finance at the detriment of the user of fund (developer). At the instance of the latter, the collateral's potential is underestimated, ultimately reducing fund available to developer. For instance where an investment appraisal considered to attract finance is undervalued, the potential returns will be underestimated and therefore renders it less attractive to investors (financiers) and vice versa. On the other side, where a sale value of a proposed project is over bloated in a forward sale/letting arrangement, the subscribers will not be able to recoup the invested capital within an expected period and where it is financed by loan, the returns from the letting /sales of the project may not be able to service/offset the loan due to inaccurate cash analysis developed from the initial valuation.

The contribution of secondary mortgage institution to real estate finance cannot be overemphasized. Nubi (2003) established that mortgage system cannot work effectively without a functioning secondary mortgage institution. The success of secondary market in the U.S has led both private and public sector officials in many countries to recommend its creation as a way of enhancing the flow of fund to housing. However, Lea (2002) emphasized that it is not possible to have a sustainable secondary mortgage market unless there is a healthy and well developed primary mortgage. Furthermore, he added that without an accurate valuation, the dream of a functioning secondary mortgage market will remain a mirage.

Therefore, accuracy of property valuation determines functionality and sustainability of the mortgage system.

Also, in an event where investment in real property is to take the form of 'sale and leaseback, the principle here involve the outright sale of one's interest in a real property as a means of obtaining finance. The same property sold is then taken on leasehold basis by the seller. This method has the advantage to the seller in the sense that he can get enough funds for his project and at the same time secure occupation. He can also obtain higher fund than in a mortgage transaction. Meanwhile, if the selling price of the land is derived from an inaccurate valuation (say under valuation), it will reduce the amount that will be paid by the buyer and the fund which will be available to the seller for the project.

The principal issue in valuation accuracy is standardizing the information set to ensure that all valuers are equally informed. Valuations are functions of information. The better the information set the better the valuation. The spread of valuations depend upon the completeness of information while only the difference in interpretation may lead to possible transactions (Brown, 1992)

In Tanzania, Sanga (2004) identified that there is low level of lending in the country despite financial institutions cash reserve (loanable funds). Also noted that lenders prefer increasing level of interest rate (on lending) and this bears noticeable relationship to lending pattern. He noted financial institutions (lenders) have largely criticized Land Act 1999 and lack of reliability on valuation of collateral as a disincentive to lending, hence the use of high interest rate and other regulatory measures. The level of interest rates was compared and contrasted to a number of registered mortgages for a period of 1999-2002 and there is a negative correlation between interest rates and number of registered mortgages.

In conclusion, the implication of valuation inaccuracy depends on the nature of the valuation inaccuracy. Overvaluation negatively affects lenders thereby discouraging granting of loans. Also, undervaluation reduces the accessed loans to the borrowers' thereby reducing available fund for property development. In this study, the opinion of the banks, valuers and developers on the possible effects of the two type of valuation inaccuracy will be sampled. The following parameters will be adopted for sampling the opinions: possibility of overvaluation creating credit risk, exposing lenders to financial

loss, causing lenders to discount FSV for cover, lenders granting loan regardless of knowledge of overvaluation, lenders giving loan lower than FSV where the is knowledge of overvaluation, overvaluation not having effect on loan availability for real estate finance, and overvaluation discouraging loan advancement for fear of risk.

Also, the effect of undervaluation will be measured based on the following criteria's: lending institutions increasing loan beyond FSV where undervaluation is detected, reduction in access of borrowers to adequate loan, undervaluation over protecting the lenders fund at the detriment of borrower's needs, and lenders bending their policies in favour of borrowers where under valuation is identified.

3.0 Materials and Method

The study population for this study includes Estate Surveyors and Valuers, Property Development Companies and Commercial Banks in Lagos, Nigeria. The sample frame of Estate Surveyors and Valuers was based on the directory of the Estate Surveyors and Valuers (2009) which pointed to a total of 270 firms in the study area. The sample frame of commercial banks was based on the list of commercial banks in Nigeria published by Central Bank of Nigeria as at December, 2012 where the total banks in Nigeria are 24 but 22 had their head offices in Lagos, Nigeria which is the case study. The sample frame of Real Estate Developers in Nigeria (REDAN) is based on the list of REDAN members on the website of the association. There 875 registered members of REDAN but 239 member companies are based in Lagos while the remaining 636 spread across other states of the federation and the federal capital territory.

The sample size of the study includes all the twenty-two (22) commercial banks which have head offices in Lagos. This will be possible since they all concentrated within 4 locations in the state. The 22 commercial banks represent 92% of the population of commercial banks in country. Also, 130 Real Estate Development Companies in Lagos will be sampled. The 130 REDAN members are the members with addresses in the 5 main commercial areas where Estate Surveyors and Valuers were sampled. This is done in order to reduce the cost and stress associated with the survey.139 Estate Surveying and Valuation firms will be the sample size of Estate Surveying and Valuation firms to be sampled. These are the Estate Surveying and Valuation firms in the 5 main commercial areas of Victoria Island/Ikoyi, Ikeja,Yaba/Ebutemetta,

Apapa/Ijora and Lagos Island. The sample size of Estate Surveying and Valuation firms was achieved through stratified sampling techniques.

Descriptive statistics is used in analyzing the non-parametric data. This includes relative importance index and frequency distribution table. The frequency distributions will be employed in generating the distribution characteristics of the variables and data made use of in the subject statistical analysis of the data. Relative importance indices will be used to assess the level of significance of forms of mortgage valuation inaccuracies and their implications on real estate development finance in the study area.

4.3.1 Profile of Estate Surveyors and Valuers

4.3.1.1 Response Rate of Estate Surveyor according to Location

A total number of 139 questionnaires were administered to estate firms which represented approximately 52% of the 270 estate surveying and valuation firms operating in Lagos metropolis. Out of 139 questionnaires administered, a total of 84 questionnaires were retrieved and found useful for analysis. Questionnaire distribution and response rates by locations are as contained in Table 4.3.1.1

Table 4.3.1.1 Response Rate of Estate Surveyors and Valuers according to Location

Location	No. of firms/location	Administered Questionnaires	Retrieved Questionnaires	Retrieval Rate %
Ikeja	49(18.41%)	26	20	77%
EbutteMetta/Yaba	27(10.8%)	14	6	43%
Victoria Island/Ikoyi	47(17.5%)	24	18	75%
Apapa/Ijora	24(8.77)	12	4	33%
Lagos Island	69(25.50%)	35	12	34%
Others	54(19.50%)	28	24	86%
Total	270	139	84	60%

Source: Author's field survey, 2013

Table 4.3.1.1 showed the number of questionnaire administered in each zone. This was 60% of the population of firms in each stratum. Lagos Island has the highest number of firms while this is followed by estate firms scattered in other location i.e 'others'. Next is Ikeja and Victoria Island and so on. This perhaps may be due to the fact that business activities are so intense in these regions. Head offices of insurance companies, banks and other business concerns are concentrated in the locations while Ikeja is also the state administrative headquarters. The services of the surveyors and valuers are mostly required in

such regions and so may account for the concentration of the firms in the zones

Details of respondents' estate surveyors and valuers with respect to academic qualification and professional qualification and age of firms are as contained in Table 4.4

4.4 General Characteristics of Respondents Estate Surveyors

Table 4.4.1 Educational and Professional Qualifications

Qualification	Frequency	Percentage	Academic Qualification	Frequency	Percentage
OND	5	6.0	Probationer/Graduate	51	61
HND	31	36.9	ANIVS	31	37
B.Sc	39	46.4	FNIVS	2	2
M.Sc	9	10.7			
Total	84	100	Total	84	100

Source: Author's field survey, 2013

6% of the respondents are National diploma holders, 83% are degree holders while 11% are Master's degree holders. 37% are Associates of the Nigerian Institution of Estate Surveyors and Valuers, 2% are fellow of the same institution while 61% are probationer members. The respondents are either principal partners or head of valuation sections of the sampled firms and the information sought there from are considered reliable for the research. The data deduced from the respondents therefore afford appreciable degree of reliability for the in-depth knowledge which respondents seemingly possess.

Table 4.4.2 Age of the company

Year	Frequency	Percentage
0-5yrs	28	33.3
5-10yrs	30	35.7
10-15yrs	14	16.7
15yrs and above	12	14.3
Total	84	100.0

Source: Author's field survey, 2013

Majority of the firms (67%) are over 4 years of age and are assumed to possess substantial experience to provide good information upon which valuable deductions can be made. It can be deduced that newly inducted valuers are taking up employment with existing real estate firms.

4.5 Perception of Estate Surveyors and Valuers

Table 4.5.1 How often do you do valuation for mortgage purposes?

Rate	Frequency	Percentage
Very often	38	45.2
Often	40	47.6
Fairly Often	6	7.1
Total	**84**	**100**

Source: Author's Field Survey, 2013

About 93% of the respondents said they often or very often do valuation for mortgage purposes. This purpose is seemingly the commonest reason estate surveyors carry out valuation and why banks are considered the largest users of valuation services.

Table 4.5.4 Valuation bias mostly reported in lending transactions in Nigeria?

Valuation bias	Frequency	Percentage
Overvaluation	69	82.1
Undervaluation	15	17.9
Total	**84**	**100**

Source: Author's field survey, 2013

To further ascertain their perception, the respondents were requested to give opinion on the type of bias which they considered mostly reported in lending transactions in Nigeria. 82% said overvaluation is prevalent while 18% said undervaluation.

4.6 General Characteristics of Respondents Banks

Table 4.6.1 Educational qualification of bank staff

Qualification	Frequency	Percentage
HND	**6**	**35.3**
B.Sc	**6**	**35.3**
M.Sc	**4**	**23.5**
MBA	**1**	**5.9**
Total	**17**	**100**

Source: Author's Field Survey, 2013

The least educational qualification possessed by the respondents is first degree (either HND or B.Sc.). 70.6% of the respondents fall within this bracket while 23.5% have M.Sc. degree and 5.9% are MBA degree holders. The level of educational attainment of bankers can be attributed to the level of

sophistication of modern day banking system.

Table 4.6.2 Professional Qualification of bank staff

Qualification	Frequency	Percentage
ICAN	4	23.5
CIB	6	35.3
CIGMA	2	11.8
ACIB	5	29.4
Total	**17**	**100**

Source: Author's field survey, 2013

Table 4.6.2 shows that all the respondents are members of one professional body or the other. 64.7% are at least Associate members of Chartered Institute of Bankers, 11.8% are members of CIGMA, 23.5% are Associate members of Institute of Chartered Accountants of Nigeria. More so, they are senior officers in the property/loan recovery and legal sections of the banks whose experiences are considered dependable and of great advantage to the study.

Table 4.6.3 Age of the company

Year	Frequency	Percentage
0-5yrs	0	0
5-10yrs	0	0
10-15yrs	0	0
15yrs and above	17	100
Total	**17**	**100**

Source: Author's field survey, 2013

None of the banks is less than 15 years of age and least has minimum of 200 branches nationwide while some have as high as 700 branches. This show the banks have wide coverage and are very accessible to developers who may which to locate them to meet their financing needs.

Table 4.6.4 Rate of granting loan for real estate development purpose

Rate	Frequency	Percentage
Very often	4	23.5
Often	8	47.1
Fairly Often	3	17.6
Rarely	2	11.8
Total	**17**	**100**

Source: Author's field survey, 2013

Table 4.6.4 shows that 23.5% of the respondents grant loan very often for real estate development purposes, 47.1% of the respondents grant loan often, 17.6% fairly often give loan for

same purpose while 11.8% rarely advance loan for real estate development purposes.

Covenant Journal of Research in the Built Environment (CJRBE) Vol.4, No.1. June, 2016.

Table 4.6.5 Types of collateral accepted by bank

Collateral	Frequency	Percentage
Real Estate	12	70.6
Shares certificate	3	17.6
Bond Certificate	2	11.8
Total	**17**	**100**

Source: Author's field survey, 2013

Table 4.6.5 shows that 70.6% of the respondents said their banks accept real estate as collateral for loan while 17.6% said they accept shares certificates and 11.8% said they accept bond certificate.

Table 4.6.6 Rate of request for valuation report in loan transactions

Rate	**Frequency**	**Percentage**
Very Often	12	70.6
Often	4	23.5
Fairly Often	1	5.9
Total	**17**	**100**

Source: Author's field survey, 2013

From Table 4.6.6 70.6% of the respondents require valuation report for their loan transactions very often, 23.5% require valuation report often, and 5.9% require valuation report fairly often. This shows that the document is important in loan transaction judging from how often it is required.

Table 4.6.7 Level of satisfaction/reliability on such valuation

Level of Satisfaction	**Frequency**	**Percentage**
Excellently satisfied	5	29.4
Fairly satisfied	12	70.6
Total	**17**	**100**

Source: Author's field survey, 2013

Table 4.6.7 revealed that 29.4% of the respondents are excellently satisfied with valuation services rendered to them by Estate Surveyors and Valuers, 70.6 % are fairly satisfied with the services.

Table 4.6.8 Does your bank grant loan facility based on FSV/MLV?

Yes/No	Frequency	Percentage
Yes	**17**	**100**

Source: Author's field survey, 2013

All the banks grant loan facility based on forced sale value advised by valuers. None of them is neither familiar with mortgage lending value nor base their decision to lend on it.

Table 4.6.9 How often do you suspect inaccuracy (undervaluation or overvaluation) in the FSV advised by your accredited valuer in the valuation of your collateral?

Degree	Frequency	Percentage
Very Often	1	5.9
Often	9	52.9
Rarely	7	41.2
Total	**17**	**100**

Source: Author's field survey, 2013

59% of the respondents said they often suspect inaccuracy in the FSV advised by their accredited valuers and 41% rarely suspect inaccuracy.

4.8 General Characteristics of Development Companies

Table 4.8.1 Educational qualification of Development Companies Officers

Qualification	Frequency	Percentage
OND	6	7.5
HND	35	43.8
B.Sc	31	38.8
M.Sc	8	10.0
Total	**80**	**100**

Source: Author's field survey, 2013

7.5% of the respondents are National diploma holders, 82.5% are degree holders while 10% are Master's degree holders. The professional qualification of the respondents were not analysed because they are not considered relevant to the information required. However, information were sought from senior/management staff and Finance Manager, where available, as they are believed to understand the modalities for loan procurement and its correlation with valuation. The information sought there from is considered reliable for the research.

Table 4.8.2 How often do you seek commercial loan for real estate?

Rate	Frequency	Percentage
Very Often	41	51.2
Often	27	33.8
Fairly Often	12	15.0
Total	**80**	**100**

Source: Author's field survey, 2013

85% of the respondent said their companies often seek loan from financial institutions to undertake real estate projects while 15% seek loan less frequently. All the respondents said they use real estate as collateral for loan procurement

Table 4.8.3 How often are you satisfied with the value ascribed to your collateral by the valuers employed for the exercise?

Level of Satisfaction	Frequency	Percentage
Always satisfied	19	23.8
Satisfied most of the time	38	47.5
Rarely Satisfied	21	26.2
Never Satisfied	2	2.5
Total	**80**	**100**

Source: Author's field survey, 2013

4.9 Prevalent Valuation Inaccuracy and its Effects

In the section below, relative index analysis is employed to analyze the data collected.

The respondents were required to indicate their level of their agreement with the questions given five options to choose from and their responses are weighted on a five – point scale using a weighted average score. The options and their corresponding ratings are as follows: Strongly agree = 5, Agree = 4, Indifferent = 3, Disagree = 2 and Strongly disagree = 1.

Table 4.9.1a Forms of bias considered most prevalent based on experience Banks

VARIABLE	Weight					Sum of weighted frequencies	RII
	5	**4**	**3**	**2**	**1**		
Overvaluation (A)	5	10	2	-	-	71	0.835
Undervaluation (B)	2	-	1	14	2	43	0.506
None (C)	-	-	-	-	-	-	0

Source: Author's field survey, 2013

Table 4.9.1b Forms of bias considered most prevalent based on experience Valuers

VARIABLE	Weight					Sum of weighted frequencies	RII
	5	4	3	2	1		
Overvaluation (A)	32	39	6	7	-	348	0.8286
Undervaluation (B)	11	38	7	22	6	278	0.6619
None (C)	-	-	-	-	-	-	0

Source: Author's field survey, 2013

Table 4.9.1c Forms of bias considered most prevalent based on experience - Developers

VARIABLE	Weight					Sum of weighted frequencies	RII
	5	4	3	2	1		
Overvaluation (A)	4	55	21	-	-	303	0.7575
Undervaluation (B)	1	6	42	31	-	214	0.5350
None (C)	-	-	-	-	-	-	0

Source: Author's field survey, 2013

The result from the Tables 4.9.1a, b and c displayed for the responses of Banks, Valuers and Developers indicate that majority of the respondents (**RII = 0.835, 0.829 and 0.7575)** responding are of the opinion that **overvaluation** is the most prevalent form of valuation bias in Nigeria. The index for the developers is lower than the other two classes of respondents because a considerable few agreed or strongly agreed with option of undervaluation as most prevalent.

Table 4.9.2a Effects of valuation inaccuracy on availability of loan advancement for real estate funding
Banks

VARIABLE	Weight					Sum of weighted frequencies	RII
	5	4	3	2	1		
Effect of overvaluation							
Overvaluation create credit risk (1)	8	6	2	1	-	72	0.8470
It exposes lenders to financial loss (2)	9	7	1			76	0.8941
It causes lenders to discount	4	10	2		1	77	0.9059

FSV to afford them extra cover against loss(3)							
Lenders give loan base on FSV regardless of knowledge of overvaluation(4)		4	2	8	3	41	0.4824
Lenders tend to give loan lower than FSV where there is knowledge of overvaluation (5)	1	15		1		67	0.7882
Overvaluation does not affect availability of loan for real estate finance (6)		3	4	8	2	42	0.4941
Overvaluation discourages advancement of loan for fear of risk	6	8			3	65	0.7647
Effects of Undervaluation							
Where identified, lending institutions may increase loan beyond FSV		2	3	5	7	34	0.4000
It reduces access of borrower to adequate loan	2	13	2			68	0.8000
It over protects lenders fund at the detriment of borrowers needs	7	9	1			74	0.8706
Makes lending institution bend their policies in favor of borrower where identified	1	3		1	12	31	0.3671

Source: Author's field survey, 2013

From the Table above, it can be inferred that overvaluation makes lenders discount forced sale value (FSV) to afford them extra cover against loss ranked 1st with 0.9059 as relative importance index (RII). This is followed by overvaluation exposing lenders to financial loss with a RII of 0.8941, and then followed by overvaluation creating credit risk with a relative importance index of 0.8470. Over valuation making lenders to give loan lower than forced sale value ranked fourth with a relative importance index of 0.7882. Discouragement of loan advancement due to fear of risk ranked 5th with a relative importance index of 0.7647 and overvaluation not having any effect on loan availability for real estate finance ranked 6th with a RII of 0.4941. Lenders giving loan based on forced sale value regardless of effect of overvaluation ranked 7th with a RII of 0.4824. It can be deduced from the above table that overvaluation has negative consequence on loan advancement and it makes lenders

to take different precautionary measures so as to guide against risk.

Also, the effect of undervaluation can also deduce from the table 4.9.2 a.It was discovered that undervaluation over protecting lenders fund at the detriment of borrowers needs ranked 1st with a relative importance index of 0.8706. Reduction in borrower's access to adequate loan ranked 2nd with a relative importance index of 0.8000. Undervaluation leading to financial institutions increasing loan beyond forced sale value ranked 3rd with a relative importance index of 0.4000 and the least ranked factor is undervaluation making the lending institution bending their policies in favor of borrower with a relative importance index of 0.3671. It can be inferred that undervaluation protects the lenders at the expense of the borrowers based on the perception of the banks.

Table 4.9.2b Effects of valuation inaccuracy on availability of loan advancement for real estate funding

Valuers

VARIABLE	**Weight**					**Sum of weighted frequencies**	**RII**
	5	4	3	2	1		
Effect of overvaluation							
Overvaluation create credit risk	54	30	-	-	-	390	0.9286
It exposes lenders to financial loss	60	22	2	-	-	394	0.9381
It causes lenders to discount FSV to afford them extra cover against loss	12	52	10	10	-	318	0.7571
Lenders give loan base on FSV regardless of knowledge of overvaluation	16	38	6	22	2	296	0.7048
Lenders tend to give loan lower than FSV where there is knowledge of overvaluation	30	34	10	10	-	336	0.8000
Overvaluation does not affect availability of loan for real estate finance	4	32	-	24	24	220	0.5238

Overvaluation discourages advancement of loan for fear of risk	34	36	12	-	2	352	0.8381
Effects of Undervaluation							
Where identified, lending institutions may increase loan beyond FSV	2	34	6	8	34	214	0.5095
It reduces access of borrower to adequate loan	30	34	16	2	2	340	0.8095
It over protects lenders fund at the detriment of borrowers needs	24	56	-	4	-	352	0.8381

Source: Author's field survey, 2013

From the Table 4.9.2b, overvaluation exposing lenders to financial loss ranked 1st with a relative importance index of 0.9381 and overvaluation creating credit risk with a relative importance index of 0.9286 ranked 2nd. Overvaluation discouraging advancement of loan for fear of risk ranked 3rd with a relative importance index of 0.8381 and lenders giving out loan lower than forced sale value whenever overvaluation is discovered ranked 4th with a relative importance index of 0.8000. Overvaluation causing lenders to discount forced sale value to afford them extra cover against loss ranked 5th with a relative importance index of 0.7571 and lenders giving loan regardless of knowledge of overvaluation ranked 6th with a relative importance index of 0.7048. Overvaluation not affecting availability of loan for real estate finance ranked 7th with a relative importance index of 0.5238. Exposure of lenders to financial risk due to overvaluation and overvaluation not affecting loan availability for real estate finance ranking 1st and 7th respectively shows that overvaluation negatively affect loan advancement by financial institutions.

Also, effect of undervaluation was discovered from the Table 4.9.2b It was discovered that undervaluation over protecting lenders fund at the detriment of borrowers needs ranked 1st with a relative importance index of 0.8381. This was followed by undervaluation reducing access of borrowers to adequate loan which ranked 0.8095. Tendency of financial institutions increasing loan beyond forced sale value if undervaluation is discovered ranked 3rd with a relative importance index of 0.5095. It

can be inferred from the table above that undervaluation protects the lenders at the expense of the borrowers based on the perception of valuers.

Table 4.9.2c Effects of valuation inaccuracy on availability on loan advancement for real estate funding
Developers

VARIABLE	Weight					Sum of weighted frequencies	RII
	5	4	3	2	1		
Effect of overvaluation							
Overvaluation create credit risk	27	53	-	-	-	347	0.8675
It exposes lenders to financial loss	31	49				351	0.8775
It causes lenders to discount FSV to afford them extra cover against loss	8	21	45	6	-	271	0.6775
Lenders give loan base on FSV regardless of knowledge of overvaluation	-	62	18	-	-	302	0.7550
Lenders tend to give loan lower than FSV where there is knowledge of overvaluation	-	53	27	-	-	293	0.7325
Overvaluation does not affect availability of loan for real estate finance	25	9	28	18	-	281	0.7025
Overvaluation discourages advancement of loan for fear of risk	-	27	53	-	-	267	0.6675
Effects of Undervaluation							
Where identified, lending institutions may increase loan beyond FSV	-	41	30	-	9	263	0.6575
It reduces access of borrower to adequate loan	18	53	9	-	-	329	0.8225
It over protects lenders fund at the detriment of	6	30	44	-	-	282	0.705

borrowers needs							
Makes lending institution bend their policies in favor of borrower where identified	21	14	36	-	9	278	0.6950

Source: Author's field survey, 2013

From Table 4.9.2c, it was discovered that overvaluation from the developer's perspective ranked exposure of lenders to financial loss due to overvaluation 1st with a relative importance index of 0.8775 and overvaluation creating credit risk for lenders ranked 2nd with a relative importance index of 0.8675. Lenders giving loan based on forced sale value regardless of knowledge of overvaluation ranked 3rd with a relative importance index of 0.7550. This is followed by lenders tendency of giving loan lower than forced sale value where there is knowledge of overvaluation with a relative importance index of 0.7325. Overvaluation not affecting availability of loan for real estate finance ranked 5th with a relative importance index of 0.7025 and overvaluation causing lenders to discount forced sale value to afford them extra cover against loss with a relative importance index of 0.6775 where overvaluation discouraging advancement of loan for fear of risk ranked 7th with a relative importance index of 0.6675. It can be inferred from the table above that overvaluation pose threat to lenders.

Also, Table 4.9.2c reveals the effect of undervaluation on real estate finance. Undervaluation reducing access of borrower to adequate loan ranked 1st with a relative importance index of 0.8225. Undervaluation over protecting lenders fund at the detriment of borrowers needs ranked 2nd with a relative importance index of 0.7050. This is followed by undervaluation making lending institutions to bend their policies in favor of borrowers with a relative importance index of 0.6950. Lending institutions increasing loan beyond forced sale value where undervaluation is discovered ranked with a relative importance index of 0.6575. It can be inferred from the table above that undervaluation protects the lenders at the expense of the borrowers based on the perception of valuers.

5.1 Summary of Findings

The result of analysis undertaken by means of descriptive statistics through the use of relative importance indices and frequency distribution tables, indicates the prevalence of inaccuracy in Lagos

state which corroborated the past studies undertaken by Ogunba (1997, 2003), Adegoke (2008), Ayedun (2009) amongst others. It further revealed that the most prevalent form of valuation bias is overvaluation as confirmed by all categories of respondents which were sampled. This discovery negates the assertion put forward by Ojo (2004) that mortgage valuations in Nigeria under represent the value of foreclosed collateral, rather, commercial bank respondents maintained that overvaluation is most prevalent.

The ranking of the effects of overvaluation and undervaluation on real estate development finance are slightly different based on the perspective of the Banks, Valuers, and the developers. The first three ranked effect of overvaluation according to the bankers are as follows: It causes lenders to discount forced sale value to afford them extra cover against loss, it exposes lenders to financial loss, and overvaluation create credit risk. Also, the first three ranked effects of overvaluation on real estate development finance according to Valuers are the following: It exposes lenders to financial loss, overvaluation creates credit risk, and overvaluation discourages advancement of loan for fear of risk. Lastly, the first ranked effects of overvaluation according to the developers are the following: It exposes lenders to financial loss, it creates credit risk, and lenders give loan based on forced sale value regardless of knowledge of overvaluation.

Also, the first three ranked effects of undervaluation according to the bankers are the following: It over protects lenders fund at the detriment of borrowers needs, it reduces access of borrowers to adequate loan, and lending institutions increase loan beyond forced sale value where undervaluation is detected. According to the Valuers, the first three ranked effects of undervaluation are: It over protects lenders fund at the detriment of borrower's needs, it reduces access of borrowers to adequate loan, and lending institutions increase loan beyond FSV where undervaluation is detected. Lastly, the effects of undervaluation on real estate development finance are the following: It reduces access of borrowers to adequate loan, It overprotects lenders fund at the detriment of borrowers needs, and it makes lending institutions bend their policies in favour of borrower where identified.

5.2 Recommendations

- It is recommended that Estate Surveyors and Valuers should always improve their knowledge and skills by attending Mandatory Compulsory Professional Development programmes and other self-development

workshops so as to improve the accuracy of services rendered.

- Banks and other clients should always provide all necessary data to Estate Surveyors and Valuers when consulting them for property valuation so as to minimize valuation inaccuracy.
- Estate Surveyors and Valuers should always keep themselves abreast of the provisions of the valuation standard so as to improve the quality of their work.
- All Estate Surveying and Valuation firms should put in place quality control measures in their practice so as to improve the reliability of their valuation reports.
- Estate Surveyors and Valuers Registration Board of Nigeria should always commission researches on property valuation accuracy and look for means to adopt the findings of such researches in the valuation standard so as to improve quality of valuation services rendered by members.
- Symposiums should be organized from time to time to bring together bank operators, valuers, developers and other valuation service users for discussions on issues bordering on valuation and client satisfaction. Effective policy decisions can be made through this medium and aid in restoring confidence in the profession. It is envisaged that this can make the lending institutions to ease up on the stringent measures they take to avoid risks emanating from valuation inaccuracy.

5.3 Conclusion

The study has shown that overvaluation is prevalent in the study area and the decision of lenders to mitigate the imminent credit risk which can result from this is impacting negatively on real estate finance. The contribution of the study to valuation and real estate finance literature is in the area of identifying the prevalent form of bias in valuation, mitigating measures and the effect on finance.

It is hoped that the recommendations put forward for ameliorating the problems of inaccuracy in valuations and real estate finance will show the required way forward from the present shortcomings in the profession to the achievement of client confidence.

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