THE PLACE OF PLANT AND EQUIPMENT VALUATION IN SOUTH EASTERN NIGERIA
ISSUES, CHALLENGES AND PROSPECTS

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Abstract: Plant and equipment valuation has obviously been left with little or no attention to in practice as valuation is majorly focused and concerned on land and landed interest. Valuation of plant and equipment is an aspect of transaction that occurs and re-occurs annually, biannually and quarterly, if not daily. The level of plant and equipment valuation in the South Eastern part of Nigeria which comprises of Anambra, Enugu, Imo Abia and Ebonyi State respectively. The purpose of this study is to examine the present condition of plant and equipment valuation in the study area. Data was collected from both primary and secondary source. Furthermore, the data was analyzed using descriptive statistics. The rejuvenation of plant and equipment valuation will tend to create a professional dynamics hence the market offers the needed opportunity in executing the practice of the distinguished noble profession in the South East Geo-political zone of Nigeria. Furthermore, having a statutory enforcement that will compel all plant and equipment transaction to undergo plant and equipment valuation, as the valuation report will be required before any official proceedings or needed attention will be given. The modus operandi will create a latent source of generating revenue, job opportunities and other embedded benefit attached hitherto.

Index Terms: Equipment, valuation, South Eastern Nigeria, Challenges, prospects.

I. INTRODUCTION

Plant and equipment valuation is a generic specialization within the valuation discipline, just as we have specialization in medicine, law and engineering among others. As a specialization, valuation of plant and equipment existed within the general valuation principles practice and methodology. (Otegbulu, 2018, Akinwande and Umeh, 2018). The valuation process is a systematic procedure used by appraisers (valuers) to provide answers to clients question about value and related issues. It’s the ability, when the appraiser understands and identifies the appraisal problem at hand and summarize when the appraisal report provides or proffer detailed solution to the client. The methodology or steps taken to solve the problem depends on the nature of the valuation assignment and availability of relevant data. The objective of the valuation process is to produce a well-supported value opinion which proves that the valuer has considered all material factors that affect the value of the asset being appraised. (America society of appraisal (ASA, 2011; Ekeocha, 2012) studies such as Gambo(2014) examined the response of Nigerian Valuers to international valuation standards application; how far the journey? Babawale (2012); an assessment of the current standard of real estate valuation practice in Nigeria; Dugeri, Gambo, and Ajayi (2012); internalizing international valuation standards: relevance and applicability issues in the Nigeria context had looked at different issues on valuation standards, in relation to plant and equipment.

Globally, plant and equipment valuation are not a popular engagement compared to land or building valuation; even though the size and value of the plant and machinery can contribute up to 80% of the company’s total asset (Nasir and Eves, 2012) argued that unlike land and building property valuation, plant and machinery transactions are often scarce and very limited resources exist in terms of information and comparison of data. However, the outcome makes various estate firms to handle plant and equipment valuation in inconsistent
manners, leading to undervaluation and overvaluation of plant and equipment. Many practitioners pay little or no attention to these technicalities.

The Present condition of plant and equipment valuation in the South Eastern geopolitical region of Nigeria have left the branch of valuation crying and weeping reason being that, the most qualified professional to handle this practice has not shown great zeal and concern towards plant and equipment valuation in its ramification.

Plant and equipment transaction take place nearly every day in the plant and equipment market but the level of valuation carried out in proportion to its transaction is not a welcome development. Nowadays, Plant and equipment valuation is diminishing everyday in our present modern practice.

The uncoordinated approach or decaying state of plant and equipment valuation by estate surveyors and valuers is perhaps the trigger for the ongoing debate on the most qualified professional to handle plant and equipment valuation Iroham et al (2013).

For improved revenue generation and reporting of plant/equipment valuation in Nigeria, authorities have been challenged to explore the service of those who are professionally qualified in asset estimation exercise (Osaji, 2017).

**Aim of the Study**

The aim of this study is to examine the present condition of plant and equipment valuation in southeastern geopolitical zone of Nigeria

**Relevancy of the Study**

Plant and equipment valuation is being degenerated on daily basis due to the level and scope it has been allow to operate. Secondly the re-awakening of plant and equipment valuation in its entirety will be a source of generating revenue as well as employment opportunities amongst other benefit attached hitherto.

**Objective of the study**

In this study, effort is geared towards accomplishing the following objectives:

- To examine the present state of plant and equipment in the study area
- To identify latent scope in plant and equipment valuation
- To evaluate the implications and effects in our economy
- To re-inform relevant stake holders on the trend, benefit, and opportunity in modern valuation practice.

**II. LITERATURE REVIEW**

**Historical Background of Plant and Equipment Valuation**

The Evolution and Development of plant and equipment valuation emanated in Egypt many centuries ago, though the appraiser’s work at the early times was concentrated on landed property, yet equipment appraisal was also undertaken. In the middle of nineteenth century with the industrial revolution and the manufacturing economies in its wake, which was concentrated in North England and the United States of America, would have marked a major development phase of the modern plant and equipment valuation.
Hitherto plant and equipment valuation functioned with the general valuation/appraisal practice because of the limited demand for such specialise services only few firms of valuers, appraisers or surveyors practiced, exclusively, on plant and equipment valuation.

The fundamental criteria for membership of the national recognized profession appraisal body is a general course of study comprising all aspect of valuation in generalization plant and equipment valuation is not an exclusive field of study. In this regard, furthermore the level of concentration in reference to plant and equipment valuation, practice, concept and theories where not in active motion until the recent dynamic demands of the market call for its service Ray and Lansutton (2012).

Consequently, all appraisal work on plant and equipment, prepared in the first phase of the century was insurance related. Appraiser where typically trained by appraisal or insurance companies utilizing apprentiship programs that often lasted up to five years. There were little similarities between companies in terms of procedure and requisite knowledge content, as standardize appraisal techniques for plant and equipment had not been developed.

Each senior appraiser had his own method and ideas as to how plant and equipment should be valued and was often reluctant to pass “hand son” knowledge to those wishing to enter the field. For the sharing of knowledge and information, it was a dark time for equipment appraiser (American Society of Appraisers, 2000).

The complex business systems of the present, the global economy of today and the current astonishing technological development, all demands systematic and theoretically, some procedures in the valuation of enterprises and other special and technical assets/properties other than real property. These professional appraisal institutions are drastically resounding to this need. The royal institution of chartered surveyors has created, within its professional practice, specialization or faculty on of which is plant and equipment faculty, recently changed to machinery and business asset faculty under general surveying (valuation).

The American society of appraisers currently teaches tests and accredits, in addition to five other areas, machinery and technical specialties (MTS) discipline. This encompasses appraisal of machinery, equipment, industrial entities, and high technological equipment. Agricultural chattels, aircraft, ships, boats, oil, gas and other mineral reserves, and public utilities (American Society of Appraisers, 2000).

The Nigerian Institution of Estate Surveyors and Values (NIESV) recently created a plant and equipment faculty among others, and conducts specialist training on that for members.

The creation of a specialist faculty or discipline of plant and machinery valuation will encourage further research and development of procedures and appraisal systems specific for plant and equipment asset/property type. Following the development in appraisal generally, there was also a slow development of appropriate books on the specialized subject of plant and equipment valuation. Practioners, hitherto, depend on general valuation books except for few articles in the professional journals, which provided a lean academic diet for plant and equipment valuers. Educational research through the intervention of the American society of appraisers (ASA) has developed series of level courses to teach the theory and practice of equipment valuation. A news-letter the MTS Journal, was introduced in 1984, with the
text, the level courses and many fine articles in the newsletter, the light of knowledge was penetrating what was for too many years, a dark and hidden field of endeavor (American Society of Appraisers, 2000).

The astronomer, Percival Lowell was quoted as having said, “it takes about twenty years “For new knowledge to filter into the text books.Unfortunately in the field of machinery and equipment appraising it has taken far longer (America society of Appraisers, 2000), the professional institutions and some individuals are currently doing their best to rectify this perception. The wealth of knowledge gathered for years is been translating in text books.

A booklet, valuation of plant and machinery, was authored by Christopher Derry as part of property valuation handbook published in 1985 by the college of estate management, center for advanced land use studies in the United Kingdom. The hand book is currently being used by RICS prospective plant and equipment candidates.

The American Society of Appraisers (ASA) followed in 1989 with appraising plant and equipment, and ten years later, valuation of plant and machinery theory and practice by Kirribudhittatts, joined the group, and valuing machinery and equipment was published by the ASA. In 2000 M.A Belo & Partners, chartered publication of guide to plant and machinery valuation, authorized by M.A Belo, a chartered surveyor and valuer practicing in Nigeria (Belo,2003). With this recent achievement in the Faculty of Plant and equipment valuation, many author has published many textbooks, articles, journals, newsletter and mimeographs, amongst the few are principles and practice of property valuation Authored by Kuye Olusegun plant and machinery valuation by Godson, S.A. Ifediora etc. the theory, concept and practice of plant and equipment valuation are gradually emerging and evolving its distinct character and content (Ifediora, 2009).

Valuation standard guidance notes for plant and equipment valuation are being published; in international and national conference and workshop on related subject regularly takes place. IVSC, for example published guidance note for plant and equipment valuation. With this reviewed literature the reader will agree with me that he who knows where the rain met him can also give the account of where the rain stopped.

Transgression of the Law

In Nigeria today, plant and equipment valuation are still in its infancy and most researches have been focused on land and building to a significant neglect to plant and equipment. Researches in this dimension are not properly attended to. No wonder (Ayedun et al, 2011; Otegbulu et al, 2011) lamented, stating that the longevity of plant and equipment valuation in Nigeria is not directly proportional to its’ success.

The promulgation of the Estate surveyors and valuers registration act (see laws of Nigeria 1990, volume 7, chapter III), which is popularly known as decree number, 24 of 1975.
This legislation established the Estate surveyor and valuers resignation Board of Nigeria ESVARBON as a corporate body EMPOWERED to regulate the profession of Estate surveying and valuation in Nigeria.

Decree No 24 of 1975 defines the profession of Estate surveying valuation as the art, science and practice of “Determining the value of all description (land, building, plant, equipment, furniture, river, sea, oil refinery, mineral deposits, quarry site, roads, oil well, farm, space etc) and the various interest therein it further spans to some abstract property like (Good will, personality, integrity etc).

The statutory recognition of the nation (Nigeria) empowered the institution and the Board into practice valuation in its entirety. Are we limited or limiting ourselves? Reason being that, in each state in the South East geo-political zone, which companies of Anambra, Enugu, Imo, Abia and Ebonyi, research reveals that there are not less than (30) thirty private establishment in each state that deals with plant and equipment which demands for different types of valuation from time to time.

. The valuation of plant and machinery which, according to Foord (1980), developed with industrial age, began to gain a significant bearing the nation’s development to boom. The accompanied valuation briefs then handled by the qualified and registered estate surveyors and valuers in accordance with the Decree No. 24 of 1975 whilst the engineers, under Decree No. 55 of 1970, prepared the technical reports on plant and machinery for such valuation (Okunlola, 1990).

Secondly, we leave in a part of the country where so many mobile machine operate like, vehicles, heavy trucks, lorries, distribution vans, in which they obtain license to operate, who does the valuation to ascertain the licensing value since it is a form of taxation that contribute to the internally generated revenue of the state or Federal Government? This procedure could also be applied to other machine like use of air craft, ships, yantch train and manufacturing machine etc. for asset declaration.

Thirdly, the use of some immobile machines that are used in production and manufacturing Constitute tax liable. In some countries like London, USA, Hong Kong and China etc. plant and equipment valuation contribute to their internally generated revenue not only that, research reveal that plant and equipment is assumed to be part of a building (and therefore rate able) is clearly set out in the valuation for rating plant and equipment in (England). But how has it been here oh! Estate Surveyors and Valuers?

III. RESEARCH METHODOLOGY

This present study obtained data from both primary and secondary sources. We achieved this through the following methods firstly; we carried out a survey to some selected registered estate surveyors and valuers to ascertain the level of plant and equipment valuation in the South East geopolitical region of Nigeria by using random sampling. In selecting estate surveying and valuation firms across south eastern states ranging from Enugu, Anambra, Imo, Abia and Ebonyi State respectively. Furthermore, the study was carried out by a research team which comprises of trained and experienced research assistant and the researchers using semi-structured questionnaire, face-to-face interview and phone call interview where necessary. Secondly; we obtained our secondary data from reputable journals, text books, newsletters, magazines and websites. The table below shows the level of practice of plant and equipment valuation among the estate
surveying and valuation firm in the region. Nigeria is made up of six geopolitical zones which are made up of South East, South-South, South West, North East, North West and North Central.

A total of 50 questionnaires were distributed to qualified and registered estate surveyors and valuers, Enugu state 10(20%), Anambra state 10(20%), Imo state 10(20%), Abia state 10(20%) and Ebonyi state 10(20%) only 25(50%) was returned and analyzed.

Data where analyzed using Microsoft Excel software as the data were presented in tables while the arithmetic where presented in chart.

**IV. DATA ANALYSIS AND INTERPRETATION:**

Fig. 4.0: Map showing South East geopolitical zone in Nigeria with a green shaded portion in the legend below.

Source: [www.google.com](http://www.google.com)
Table 4.1 Table showing in summary of respondents’ response to the researchers’ questionnaire

<table>
<thead>
<tr>
<th>S/N</th>
<th>Enugu State</th>
<th>Anambra State</th>
<th>Ebonyi State</th>
<th>Abia State</th>
<th>Imo State</th>
<th>Summary of our interviews in respect to this study</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Have your firm carried out valuation for the purpose of insurance/compensation</td>
</tr>
<tr>
<td>2.</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Does the government have a role to play in plant and equipment valuation</td>
</tr>
<tr>
<td>3.</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>Good</td>
<td>Fair</td>
<td>How will you assess the level of plant and equipment valuation in Nigeria, poor, fair, good, best</td>
</tr>
<tr>
<td>4.</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Have your firm carried out plant valuation for taxation purpose</td>
</tr>
<tr>
<td>5.</td>
<td>Last year</td>
<td>2yrs ago</td>
<td>Nil</td>
<td>3 year ago</td>
<td>Last year</td>
<td>When last did your firm carried out plant and equipment valuation</td>
</tr>
<tr>
<td>6.</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>How many times have your firm carried out plant and equipment valuation for mortgage purpose.</td>
</tr>
<tr>
<td>7.</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>3</td>
<td>7</td>
<td>How many times have your firm carried out plant equipment valuation</td>
</tr>
<tr>
<td>8.</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>How many times have your firm carried out valuation For the purpose of balance sheet,</td>
</tr>
<tr>
<td>9.</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Have your firm carried out plant and equipment valuation for mortgage purpose</td>
</tr>
<tr>
<td>10.</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Have your firm carried out valuation for auction purpose</td>
</tr>
</tbody>
</table>

Source: Field Survey Collected from twenty five estate firms across the South East geopolitical Zone of Nigeria (2018). From the table above, it’s obviously seen that plant and equipment valuation is in stagnation or dilapidating state in the South East.

Figure 4.1 figure showing last time plant and equipment valuation carried out by a registered estate surveyor.

![Diagram showing last time plant and equipment valuation carried out by an Estate Surveyor and Valuer in South East Geopolitical Zone of Nigeria.](image-url)
V. RESULTS AND DISCUSSION

SURVEY - I

Fig.5.1 Plastic Manufacturing in Enugu

Source: field survey by the researchers, 2019.

Enugu as a city offers a great opportunities to estate surveyors and valuers due to its strategic location and level of industrial activity. Enugu has many manufacturing industries that manufacture food and beverages, plastics, vehicles, etc.

Currently the government of the state is making effort to make the state an industrial hub in the South East. This company has machine which from time to time requires the service of a valuation for business transaction. Therefore valuation for balance sheet purpose, valuation for rating taxation purpose, valuation for sale and other related valuation will be passing on the machines from time to time which are the responsibility of estate surveyors and valuer to carry out such valuations. Enugu as a state has so manufacturing companies which make use of machines of various kinds.
Survey – II

Fig. 5.2 Cable Manufacturing Company in Anambra

Source: field survey by the researchers, 2019.

Anambra being the state with the highest level of Commercial activity ranging from industrialization to manufacturing, trading and production of good and services. The Fig 5.2 above is a cable manufacturing machine in one of the reputable industry in Anambra State. This company is public liability companies that produces an annual statement of account in which both fixed and mobile machine are valued and stated in annual report;

Research also reveals that companies that produces annual statement of account in Anambra are many this platform create opportunity for both the government and the estate surveyor and valuer to harness this opportunity so as to improve the status of the profession in such a way the government and the Nigeria institution of estate surveyors and valuers (NIESV) will partner, each body having their part to play.
Survey - III

Fig. 5.3 Quarry Site in Ebonyi State

Source: field survey by the researchers, 2019.

Mineral Deposits in their quantities is one of the natural heritage of Ebonyi State this mineral include lime stone, granite, potash, gypsum and chalk etc.

These minerals are in lager quantity due to their geological strata and geographical natural advantage.

This has attracted many investors that use heavy machines and equipment use in mining, extraction and crushing some mineral deposit. Some of these activities call for mega valuation activity because the interest as take exceeds that of plant and equipment valuation it touches across royalty, compensation, valuation and Italia.
Survey - IV

Fig. 5.4 Food Processing Industries in Abia Stat

Source: field survey by the researchers, 2019.

The Aba industrial city have been the oldest city known for its industrial activity, currently the government is rejuvenating the industrial sector to bring it back to its industrial status. In the cause of this research we discover that Abia has nearly the largest number of industries, if all the industries are to be functional, some of the companies where owned by the government, private investors and other agencies. Valuation of plant and equipment in this area will create job opportunity not only for estate surveyors but for other related profession in business environment as generating of revenue will be the benefit of government under a well-coordinated frame work.
Imo State is one of the ancient states in South Eastern Nigeria especially its capital Owerri which offers opportunity to the real estate industry due to the level of urbanization and economic activities like industries, refineries, farms and other industrial establishments. This opportunity includes mortgage valuation for sales and other related valuation. New companies are emerging in Owerri and its surrounding, companies like bakery, bottling company, heavy companies etc. This therefore places a necessity on the shoulders of estate surveyors to play their role in this context of professional civilization.

VI. LIMITATIONS
The research study was conducted from 2019 June to May 2020 therefore the results of the research study may have trivial limitations due to time variation. Collection of data and some other important information from five states that made up the South East geopolitical zone was another factor of limitation of time. The research was carried out in the south east geopolitical zone which comprises of Enugu, Anambra, Ebonyi, and Abia and Imo state respectively; hence it has geopolitical zone limitations. The study was centered on registered estate surveyors and valuers in the study area. This study is limited to plant and equipment valuation.

VII. CONCLUSION AND RECOMMENDATIONS
This paper has revealed some areas that can be explored to revamp the spirit of plant and equipment valuation in the south east Nigeria. Therefore, the aims of reviving the aspect of plant and equipment valuation lies in the hands of the institution and the board on one hand and responsibility of the government on the other hand. It is the responsibility of the institution and the board to educate the government on the need of creating and implementing a policy that will sustain the regular practice of plant and equipment valuation not only for government establishment, it should also be enforced to all private sectors to comply with so as to create an atmosphere for government...
for the purpose of policy making, educating investors, encourage productivity and ascertain the true value of annual national gross domestic product (GDP).

Secondly, it will guide valuation for all public sectors assets which is a valuation carried on the basis of fair value (Adekunle and Bature, 2018).

Thirdly, it will give a true status of a company when declaring annual statement of account, reason being that, during the declaration of companies annual statement report figure is declared on land and building, plant and equipment, cash and expenditure, profit and loss etc. who valued the plant and machinery?

The question here is who does the valuation and where is the valuation report made by a registered surveyor and valuer quoted in the annual financial report in line with the International Valuation Standard (IVS) in conjunction with International Financial Reporting Standard (IFRS, 2012; IVS, 2011).

Finally, the Nigerian Institution of Estate Surveyors and valuers should rise to their responsibility to ensure that all duly process is followed in respect to plant and equipment valuation as this turnout will make the profession relevant in restructuring and reinstating the state of Nigeria economy.

**Recommendation**

1. Valuation of plant and equipment will help the government to ascertain the true level of national gross domestic product at the same time increase the level of internally generated revenue.
2. Placing plant and equipment valuation at its rightful position will create job opportunities not only for estate surveyors and valuers but for the entire profession that has link with accounting, engineering and investment at large.
3. Working in guideline with International Valuation Standard (IVS), International Public-Sector Accounting Standard (IPSAS), and International Financial Reporting Standard (IFRS) etc. projects Nigeria intellectual status thereby making our financial reporting internationally accepted because the report is in line with international best practices.

**VIII. ACKNOWLEDGEMENTS**

We wish to acknowledge the contributions of everyone, especially authors and publishers, whose works were consulted during the execution of this study and others who contributed directly or indirectly to the success of this work, above all our thanks goes to editor-in-chief and all members of Journal of Emerging Technologies and Innovative Research (IJETIR) for accepting this work in anticipation. Thank you all.

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