Journal of Construction Project Management and Innovation, 9 (2): 121-135, 2019
ISSN 2223-7852

ENGENDERING TRANSPARENCY IN VALUE DETERMINATION OF WETLANDS IN NIGERIA'S NIGER DELTA: A CASE FOR AN ABDUCTIVE APPROACH

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ABSTRACT

Reviews of previous investigations into the causes of restiveness and economic deprivation in the Niger Delta region of Nigeria reveal that the payment of inadequate compensation for acquired landed assets has contributed immensely to this incidence of these circumstances. Whereas several studies have sought to investigate the reasons for such complaints, a paucity of studies seeking to conduct such investigation from a theory development praxis has been noted. This study is prompted by this observation. A parallel convergent mixed-method research design was deployed for data elicitation. Data was obtained through a mix of interviews and questionnaire surveys. The information sought was premised on the need to understand the approaches used by valuers and to determine if any research approach was applied during the process. The emergent data was using descriptive statistics. Findings from the study indicate that the dominant method for valuation of wetlands for compensation purposes; the pre-determined compensation rates method, was predicated on the deductive approach. After a review of the four approaches available, the paper recommends the adoption of an abductive research approach for value determination in such instances due to the inherent principles associated with the approach.

Keywords: Abductive Approach, Compensation, Niger Delta, Value

1. INTRODUCTION

Due to the large proportion of natural resources available within the Niger Delta region, various oil and gas exploration and exploitation activities are frequently undertaken in the region (Babawale, 2013). These activities, which range from seismic prospecting to drilling and construction activities, affect the environment, particularly land. As such, these activities have contributed to the loss of land by the host communities within the region to major players in the industry, consisting mostly of multinational oil and gas companies (Bello and Olukolajo, 2016). Another contributory factor to the loss of land by the original owners derives from the issue of incessant pollution due to the emergent wastes and accidents resulting from oil and gas activities. Various exploration and exploitation activities produce contaminants which undermine and pollute land assets. Polluters have been known to acquire contaminated land assets, paying compensation to the original owners of such property.

Land and other assets affixed to it are considered prime assets in the region. This consideration is informed by the notion that it not only provides a platform for the development of shelter but also serves as a source of livelihood for a generous proportion

of the populace. Indigenes of this deltaic region are predominantly farmers and fishermen hence deriving their livelihoods from land. Also, the scarcity of land because of the dominant nature of water bodies and swamps in the region makes ownership of any piece of land a worthwhile venture. Hence, the intense rivalry within communities over boundaries of communal and individual lands alike. Therefore, the loss of land under any circumstance is one that is repelled by indigenes. When such loss becomes inevitable, the owners of such land strive to ensure that they are adequately compensated for such loss. The determination of this compensation has been a major source of discontent and crisis in the Niger Delta. The amount of compensation paid depends on the items of compensatory interest found on the land, river, or creek (Akpan, 2005). These items may be buildings, shrines, tombs, crops and trees, plants, fishponds, fishing traps, fishing nets and animal fence. The determination of this compensation has been a major source of discontent and crisis in the Niger Delta, whether the land is being acquired or when it is polluted.

Unfortunately, it appears that the ambition to secure fair and adequate compensation is one that is far-fetched. This observation is based on the discovery that a significant proportion of the cases of restiveness and deprivations experienced in the region recently have been traced to the issues of poor and inadequate compensation paid out to the indigenes by sectoral players for the acquired land. Reiterating this fact, Ogedengbe (2007) and Bello and Olukolajo (2016) admit that issues concerning inadequate compensation were partially responsible for the restiveness and feelings of deprivation in the region. Also, they observe that the compensation paid to residents whose lands were acquired was deemed inadequate.

Extant studies seem to attribute this inadequacy of compensations to the non-investment of the right professionals in the valuation process, hence suggesting that the inclusion of such professionals will enable the payment of adequate compensation to the indigenes of the region (Akpan 2005, Kakulu 2008, Nuhu 2008, Ogedengbe 2007 and Otegbulu 2009). According to Decree No. 24 of 1975 (now Cap E13, Laws of Federation of Nigeria 2004), Estate Surveyors and Valuers are statutorily empowered to execute valuation exercises (Cap E13, 2004). Because of this, valuers, as they are usually referred to, are the only professionals known to law who can ascribe value to any property. Undoubtedly, the non-inclusion of valuers in any valuation process would gravely undermine the credibility of the valuation exercise hence the consensus between various scholars in this regard (Babawale and Omorin, 2012; Otegbulu 2009; Nuhu 2008). On the other hand, landowners and multinational companies alike have accused such valuation professionals of covert connivance with opposing parties resulting in a whittling down or inflation of the amount of compensation. Such accusations have given rise to litigations in various courts of law, contesting the adequacy or otherwise of the determined value.

Commenting on valuer behaviour generally, Millington (2003) wonders whether valuers are thinking people, or they simply pursue their activities as creatures of habit, acting in a repetitive manner with little consideration given to whether the habits they follow, perhaps acquired over many years and possibly acquired from an earlier generation of valuers, are in fact, appropriate procedures for valuation problems faced in the contemporary society. He asserts that independence of thought may be critical in the judgmental process, yet in circumstances, wherein statutes or professional rules and regulations dictate how professionals must operate, real independence of thought may be dangerous or impossible to incorporate in the valuation process, even though in some circumstances it might be highly desirable because it would result in a more realistic valuation. Such observations by Millington makes an investigation into the extant practices of valuers in the conduct of their statutory roles, imperative. More especially, the underlying approach adopted by valuers in the conduct of their roles needs to be reviewed. Basically, this is what this study seeks to achieve, albeit within the context of the valuation of contaminated and compulsorily acquired land in Nigeria's Niger Delta region.

This paper consists of the following sections: a brief review of the impact of oil and

gas activities on land values; an exposé of relevant valuation practices; the research methodology adopted in the collection and analysis of data; presentation of findings; discussion of findings and the case for the adoption of the abductive research approach, and; the conclusion.

2. LITERATURE REVIEW

Description of the Study Context

Nigeria's Niger Delta region has severally been described as one of the largest deltaic regions in the world. Situated within the Gulf of Guinea, the region spans an estimated 70,000 sq.km hence occupying about 8% of the entire nation's landmass (Bello and Olukolajo, 2016). With a terrain replete with many distinct ecological zones, coastal ridge barriers, rain forests, freshwater swamps and mangrove swamps alike, the region is regarded as a significant contributor to the nation's revenue due to the abundant oil and gas deposits which are domiciled within it. These natural resources account for an average of 90% of the nation's export revenue. From governance and administrative perspective and in consonance with Nigeria's federal system, the region is divided into nine states, namely: Abia, Akwa Ibom, Bayelsa, Cross-River, Delta, Edo, Imo, Ondo and Rivers states respectively. Figure 1 shows the map of the Niger Delta and their position on the Map of Nigeria.

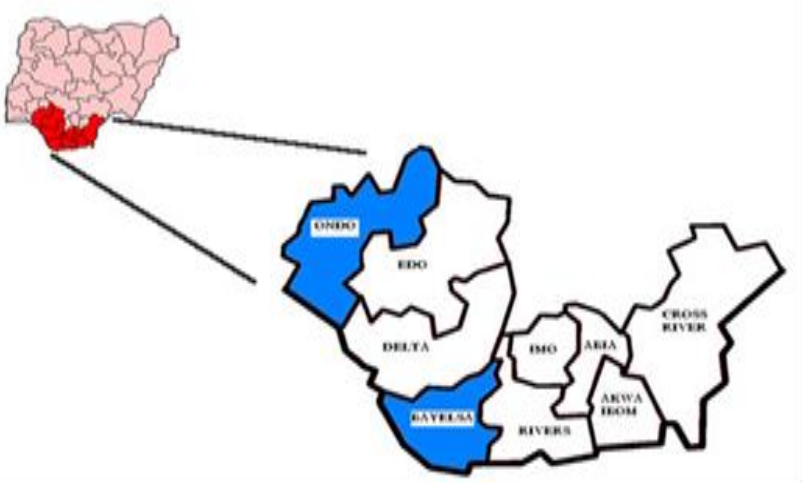

Figure 1. Map of the Niger Delta
Source: www.nigerianeye.com

Prior to the emergence of oil production as a prominent economic activity, the inhabitants of the Niger Delta were mostly farmers and fishermen. The process of oil exploration and exploitation has now affected the socio-cultural life of the people as it has deprived them of their sources of livelihood.

Impact of Oil and Gas related activities on Land Values

The land is the entire non-reproducible, physical universe, including all-natural resources (Hubacek et al 2006). They describe land sites as comprising of everything within the earth, under its boundaries and over it, extending infinitely into space. In addition to a location for a house or building, a land site includes the minerals, water, trees, views, sunshine and air space where natural laws prevail. Contrary to the natural definition of land, the existing laws

affecting land in the Niger Delta adopt a narrow definition of land which excludes minerals and natural resources occurring underwater (Cap. P10, Cap. P12, and National Inland Waterways Act, 1997).

Oil and gas prospecting activities impact on the physical environment, particularly, land, swamps, rivers, creeks and even air. The World Bank (2011) outlines these impacts:

I. The prospecting stage by the services of seismic companies (this may damage community property and the environment during their activities);
II. Acquisition of land for its activities (this alienates the people from their land in an area where land is scarce both for farming and habitation).
III. In addition, the company may conduct dredging and gas flaring; place pipelines across land and creeks, and complete a host of other actions that potentially touch on the basic livelihood of the community;
IV. The actual process of oil exploitation and exploration could be hazardous. One of the very regular hazards in the region is oil pollution, which can occur from equipment failures, "act of God", and accidental spillage among others.

To buttress the intensity of these impacts, the Peter and Dave (2013) Report categorised the impacts of oil exploration and exploitation activities as rapid and uncontrolled urbanization, occupational changes, the loss of fishing grounds, the disappearance of livelihoods and land shortages among others.

To ameliorate the impact of these adverse effects on host communities, extant national laws concerning compensation require that the oil companies, mainly multinational companies, negotiate compensatory measures with the communities and individuals affected. In identifying the relevant parties to deal with, the oil companies are expected to adhere to the prevalent land tenure practice in their area of operation on the surface, while relying on the extant laws of the Federation in determining the framework for assessing the right compensation amount to pay. In practice, the oil companies deal with the government in matters of land acquisition and obtain a license to commence exploration and exploitation, but they also need to obtain a "license to operate" from their host communities by paying a "just and fair compensation", as part of their Corporate Social Responsibility. Akpan (2005) observes that a logical consequence of the Nigerian government's definition of land ownership and control of petroleum resources is that private land can be compulsorily acquired to make way for any aspect of petroleum development since the government defines the exploitation of petroleum resources as constituting public use. The implication of vesting the ownership of petroleum resources in the Federal government is that individuals only now own the surface rights on the land and are only entitled to compensation for their improvements in the form of buildings, economic crops/trees, shrines and ancestral cemeteries, tombstones, fish ponds and channels, fish lakes animal and fish fences and any other private developments.

Therefore, the amount of compensation paid is dependent on the items of compensatory interest found on the land, river, or creek. Seemingly, this overt reliance on a schedule containing a list of compensatory items forecloses the level of flexibility which a valuer can bring to bear when engaged to carry out a valuation for compensation activity. This approach holds the potential for causing acrimony between the interested parties over the value declared (Bello and Olukolajo, 2016).

Property Valuation and Valuers: Issues Arising

Gilbertson and Preston (2005) argues that since a major proportion of financial decisions revolve around real property, there is a strong public interest in the integrity of the valuation process. Furthermore, he contends that the need to avoid the likelihood of a valuation-induced collapse in the financial sector drove the emergence of valuation standards both at

the national and international standards. As cited by Loren and Lutzkendorf (2008), Miller and Markosyan, (2003) observe the need for professions to pause and reflect on past significant developments which have heralded change within such a profession.

Without taking the time to reflect on such "change", it becomes easy to believe that current practices are enough and that professionals can simply become more experienced at doing the same thing repeatedly. But viewed from a long-term perspective, business practices have changed dramatically and will likely continue to change. "Business as usual" across various facets of the economy will not last more than part of a single generation. The practice of property valuation is not an exception. If anything, the inherent dynamics of the property market implies that valuation practice should strive to keep pace with such dynamism. Valuation problems and assignments are by their nature very diversified and thus call to question, the applicability of prescribed standards.

In the USA, appraisal societies, academics, and governments have wrestled with the issue of valuation standards since the Federal Housing Administration (FHA) Valuation Standards of the 1930s. The Appraisal Institute had begun to disseminate standards of ethics, training, expertise and practice. Generally, valuation standards contain what should be done to comply with rules governing licensing, ethics codes, educational requirements, and punishments for malfeasance, all of which are aimed at improving the appraisers' professional capabilities, responsibilities and contains incentives for good work. A typical valuation framework provides a process and logic to be followed in determining a defined value for a defined valuation purpose. This implies that a valuation framework will serve as a quality control mechanism for assessing valuation outcomes. Kummerow (2006) states that all measurement processes such as valuation involve errors and, that appraisers have always glossed over such errors and not reported them in the bid to preserve the credibility of their appraisals. Whilst confirming that standardization of data collection and analysis methods will control the quality of the results, he suggests that explicit appraisal protocols ensure that the process of appraising assumes a more empirical and scientific dimension, grounded in observation and data analysis. Although the various professional bodies and regulators of appraisal practice undertake steps that promote standards of practice or general valuation protocols, like the RICS, AI, Appraisal Foundation, ESVARBON, NIESV, and IVSC, with examples of the Standards like the Red Book, USPAP and the IVS Valuation Standards, valuers have continued to report facts and descriptions that are not always related back to their impact on the valuation of the subject property and ignoring the provisions of the available standards. This non-compliance often results in the absence of any consistency in valuation reporting. According to Kinnard et al. (1997), much of the framework of current appraisal theory was established on an ad hoc basis, under considerable pressure to "get the job done".

Millington (2003) summarizes the generality of problems confronting the valuation profession as including, but not limited to the following:

I. The difficulties caused when there is only limited availability of reliable market information, particularly at times when there is either limited market activity or when major changes have occurred;
II. The determination of the appropriate method of valuation for specific valuation situations and the correct application of each method;
III. The need for consistency in the application of valuation principles and methods, particularly when valuations are made for asset valuation purposes, and also when valuations are made using evidence obtained from the analysis of market transactions;
IV. The implication of modern computing techniques and the application of discounted cash flow approach to valuations;
V. The growth of international property investment and the implication of same;
VI. The problems of valuing properties subject to unusual leasing arrangements, for example where inducements have been given to tenants or where there are turnover

rents;

VII. The problems of valuing very large property developments for which there is likely to be only a very limited number of possible purchasers, and possibly none at any specific point in time;

VIII. The problems caused by the development of new 'vehicles' for property ownership and property investment;

IX. The valuation problems caused by the increased environmental awareness of society and by such specific problems as contaminated (or poisoned) sites;

X. The need for valuers to take macro-economic considerations into account in addition to local considerations.

Whilst it can be observed from the abovementioned list that not all problems beleaguering contemporary valuation practice bothers on the methodology, the latter makes a significant contribution to the validity or otherwise of the determined value. This makes a review of extant methodologies as well as the philosophical underpinnings of these methodologies, imperative.

Shortcomings of Extant Wetlands Value Determination Appraisals in the Niger Delta

Scholars have identified several shortcomings of the current valuation practice for the determination of the value of wetlands in the Niger Delta region of Nigeria. Deeyah and Akujuru (2016) attempt to chronicle some of these perspectives in their assessment of the effectiveness of the compulsory acquisition practice in road infrastructure provision in one of the Niger Delta states- Rivers state. According to them, statutory provisions of the Land Use Act was responsible for the inadequacy of the compensation paid out to the inhabitants of the compulsorily acquired land. They observed that the Act only provided for the payment of compensation and not adequate compensation. The authors berated the restrictions on the heads of claims and the non-payment of compensation for undeveloped land- conditions supported by section 29 of the Land Use Act. Section 29 (4) of the Land Use Act allows for compensation to be paid only for the following items; a) Land for an amount equal to the rate, if any, paid by the occupier during the year in which the right of occupancy was revoked; b) Building, installation or improvement therein, for the amount of the replacement cost of the building, installation or improvement, and; c). Crops on land for an amount equal to the values as prescribed and determined by the appropriate office (Deeyah and Akujuru, 2016: 79-80). Other lapses identified therein include the non-inclusion of just terms compensation principle, the non-recognition of the open market value of the property being acquired but rather a pre-determined rate for computing the value of such property, and; the restrictions concerning the nature of interests in land as the Act assumes that only an occupier of the land being acquired can lay claim to being compensated for the land and no one else. However, this is not usually the case in real life as a multiplicity of interests are known to exist in any parcel of land. The lack of transparency in the compensation assessment and non-adherence to good practices were also observed as fundamental drawbacks to the valuation of compulsorily acquired land in the Niger Delta region.

Whilst corroborating the views elucidated by Deeyah and Akujuru (2016), Bello and Olukolajo (2016) in another study, attribute the challenges associated with the computation of fair and adequate compensation for wetlands to the Land Use Act. They decry the seeming monopolization of access to ownership of oil-bearing land to the state with the backing of the Act. This, they argue, denies host communities of any rights over the oil and gas reserves domiciled within their territories. Also, they proceed to identify the unwillingness of the oil prospecting companies to pay adequate compensation, the lackadaisical attitude of oil and gas companies, instances of protracted litigations and greed of community representatives etc. as other factors which contribute to negating the payment of fair and adequate

compensation for wetlands. Although Bello and Olukolajo (2016) indicate that a clamour for the adoption for Total Economic Value (TEV) as being most appropriate for valuation of land for compensation purposes was consistent among many valuers involved with the practice, they reiterated that the principles underpinning TEV were neither in agreement with the current valuation methods permitted nor in conformity with the extant legal framework upon which the valuation for compensation practice was premised.

Similarly, Babawale (2013) highlights the failings of conventional methods of valuation in the conduct of environmental valuation such as is the case with wetlands. The scholar advocates for the use of an analytical framework which surpasses the limits of the three conventional methods of valuation. Using the sale comparison method as an example for the valuation of contaminated wetland valuation, Babawale (2013) points out the difficult if not impossible task of identifying a good, comparable sale of contaminated properties, polluted in like manner for appraising and determining the value of another contaminated wetland.

To further buttress the anomalies experienced as per unfair compensation for compulsorily acquired property, Ige and Oladapo (2018) in their study into the variations observed in the compensation paid for compulsory property acquisitions in Ondo state, compared the compensation amount which was arrived at by government against the figures calculated by a private valuer. They established a statistically significant variation between both figures thereby establishing the unjust nature of the valuation for the compensation process. Also, the tendency of valuers to defer to their clients, in this case, oil and gas companies have been observed. Although this tendency was established in a study by Nwuba et al. (2015) concerning the influence of clients on valuers during mortgage-related valuations, the findings from their study are not further from the truth in the case of valuation for contaminated wetlands. Such deferral tends to work against the claimants and leads to a deprivation of adequate compensation for landed assets.

Based on the foregoing, it can be safe to deduce that the incidence of inadequate compensation can only be overcome by a rethinking of the approach adopted for the calculation of the value as well as the legal framework underpinning such calculations, in this case, the Land Use Act. This study seeks to explore the former, viewing the same from a research approach prism.

The Research Gap

Although a plethora of studies have sought to investigate the causes of the payment of inadequate compensation for compulsorily acquired and/or contaminated wetlands, it has been observed that most of these studies seek to explore the phenomenon from the utility of the legal framework underpinning the computation of values. This study observes a paucity of studies into the choice of methods and the nature of the research approaches, if any, guiding valuers during the selection of a probable valuation framework. Such paucity is indeed regrettable, particularly for a profession that is expected to be at the cutting edge of exploring other vistas for delivering sound judgements on value.

In this study, the phrase 'research approach' is used in a similar context to the studies carried out on research methods, such as Saunders et al (2012). According to these scholars, every research (investigative) activity should rely on the use of theory and stress that the research (investigation) approach adopted indicates how the theory is applied to achieve either the development of a new theory or the extension of existing theory. Various research methodology scholars agree that a thorough description and justification of the research approach adopted would have a major impact on the credibility of the emergent theory. Likewise, within the realm of property valuation, the authors argue that the value derived at the end of the valuation process is analogous to an emergent theory and therefore infer that the validity and/or credibility of an emergent value is mainly dependent upon the valuer's ability to highlight the research approach upon which the conduct of the valuation exercise and the subsequent determination of value was premised. The art and science of property

valuation have no difficulty fitting into the realm of contemporary research especially evaluation research with the valuer assuming the role of a researcher in his/her quest to rely on extant data to arrive at a determined value. As such, it is only logical that the valuer, just like the researcher, understands the research approaches available and uses the most suitable method as predicated by the appropriate approach. Such approaches available to the valuer within this context include deduction, induction, and abduction approaches (Blaikie, 2007) respectively.

Based on the foregoing, this study concerns itself with an investigation into the development of an understanding of the extant approach guiding the choice of valuation methods and frameworks adopted by valuers in the determination of value for compensation in the Niger Delta, if any. Such an inquisition will engender an understanding of approaches guiding the entire valuation process and the choice of methods. In the absence of any known philosophical approach or the underwhelming performance thereof, the authors will attempt to explore the usefulness of the abductive approach given its inherent features in delivering a robust value determination process.

3. RESEARCH METHODOLOGY

To achieve its aim, this study adopts a case study research design. The case study has been applauded by scholars as a suitable approach for studying a phenomenon within its natural context, hence engendering an in-depth investigation (Yin, 2013). The Niger Delta region was selected as a case study. Considering that this study is focused on the valuation of contaminated land and compulsorily acquired land in Nigeria's Niger Delta region, expectedly, participants to the valuation of such property within the region were selected as probable interviewees in accordance to the dictates of purposive sampling (Denscombe, 2010). The authors relied on a publicly available database of registered Firms of Estate Surveyors and Valuers who have their operations domiciled in the nine states which constitute the Niger Delta Region (Fig.1). After a proper search on the Directory of the Nigerian Institution of Estate Surveyors and Valuers, a total of sixty-five (65) active firms were identified. The desire to fulfil the tenets of purposive sampling led the authors to further prune down the list of identified estate firms by investigating publicly available information relating to the previous valuation of contaminated lands in the region. This led to the selection of twenty-four (24) firms.

These firms were approached by the authors and gatekeepers identified. These gatekeepers, mostly principal surveyors and/or head of branches of selected firms enabled snowballing as they introduced the authors to valuers within the firms who had cognate contaminated land valuation experience. The authors then approached these persons for interviews. There was an overwhelming interest in the study, and this was reflected in the number of valuers who responded positively to the request to be interviewed.

However, out of a total of 57 valuers approached for interviews, 45 valuers indicated a willingness to be interviewed whilst 12 opted out citing very busy schedules. Despite committing to participating in the interviews, prospective interviewees complained about their busy schedules and requested to be surveyed instead. This led to the development of questionnaire surveys which were self-administered to a larger proportion of this sample. Summarily, whereas 36 respondents participated in the survey whereas 9 interview sessions were conducted with the remainder of the sample population. The interviews and surveys were conducted in a manner that is suggestive of convergent parallel mixed methods research design since both instruments were deployed to different participants within the same time-window (Tomazi et al. 2018). The benefits of this research design include; its enhancement of the researchers' ability to collect and analyze two independent strands of both qualitative and quantitative data at the same time and within a particular phase and; enabling the identification of the incidence of convergence, divergence, contradictions

and/or relationships culminating from two strands of data. As such, the interviews were and interviews have been described as a salient technique for collecting qualitative data as they provide a platform for the interviewee to relieve his experience, particularly when semi-structured and/or unstructured interviews are utilised (Denscombe, 2010).

The decision to utilize face-to-face structured interviews was premised on the need to achieve consistency during the data analysis phase. Nine (9) structured interview sessions lasting for an hour on the average were conducted within a span of three months at the offices of professionally registered firms with experience in contaminated wetland valuation for compensation purposes in the Niger Delta region. At the same time, self-administered surveys were handed out to respondents in similar firms with the same intention. Questions posed by the interview protocols and the questionnaires ranged from the type of valuation methods adopted, the rationale for the adoption of such methods, and perceived shortcomings of the adopted method during its application. Data emerging from both methods were subsequently analyzed using descriptive statistics. The emergent data-enabled examination of the underlying philosophical approach guiding the conduct of valuation of contaminated land in the Niger Delta region and the impact of such philosophical stance, if any, on the validity of the determined value.

4. FINDINGS AND DISCUSSION

Experience with the conduct of contaminated land valuations in the Niger Delta

It was observed that all the interviewees and respondents had extensive experience in the contaminated wetland valuation for compensation purposes within the Niger Delta. In fact, the average years of experience for the sample was 15 years. Admittedly, this positions them as prime informants capable of making immense contributions to the attainment of the study's aim.

Choice of Methods

Participants were asked to indicate which method of valuation they preferred to use from a possible choice of nine (9) methods of valuation viz: Comparable Sales, Depreciated Replacement Cost, Pre-determined Compensation Rates, Income Capitalization, Sub-division Development, Discounted Cash Flow, Contingent Valuation, and Hedonic Pricing method. To enable the valuers to choose, they were asked to indicate which method they preferred, and their responses and the respective ranking is shown in Table 1.

Table 1. Ranking of valuation methods used.

Method of Valuation	Never	Every Time	Score	Rank
Comparable Sales	36	25	0.41	3rd
Depreciated Replacement Cost	26	35	0.57	2nd
Pre-Determined Compensation Rates	11	50	0.82	1st
Income Capitalization	43	18	0.30	4th
Subdivision Development	56	5	0.08	8th
Land Value Extraction	65	6	0.09	7th
Discounted Cash Flow	52	9	0.15	5th
Contingent Valuation	53	8	0.13	6th
Hedonic Pricing Model	56	5	0.08	8th

Source, Authors' Fieldwork (2017)

From the ranking evident in Table 1, the proclivity of the respondents towards the frequent use of the pre-determined Compensation Rates, followed by the Depreciated Replacement Cost method and thirdly, the Comparable Sales method is discerned. When the same question

was posed to the interviewees, 92% of them admitted that they usually adopted the pre-determined Compensation Rates method. This implied the dominant nature of the pre-determined Compensation Rates Method.

Rationale for Choice of Valuation Method

There was consensus between interviewees and respondents concerning the rationale behind the choice of valuation methods. They stated that their choice of valuation method was dictated by the prescription of the relevant statute. This result confirms why professional valuers always adopt the pre-determined Compensation Rates method for compulsory acquisition and contaminated land valuations as has been reported by several authors like Ogedemgbe (2007), Akpan (2005), Nuhu, (2008), Kakulu (2008), and Otegbulu (2009). Other reasons influencing the choice of valuation method include; method of valuation considered suitable for the subject valuation task, the method of valuation normally adopted by the respondent's /interviewee's valuation firm for similar assignments undertaken previously and; following the practice of other valuation firms as shown in the bar chart below.

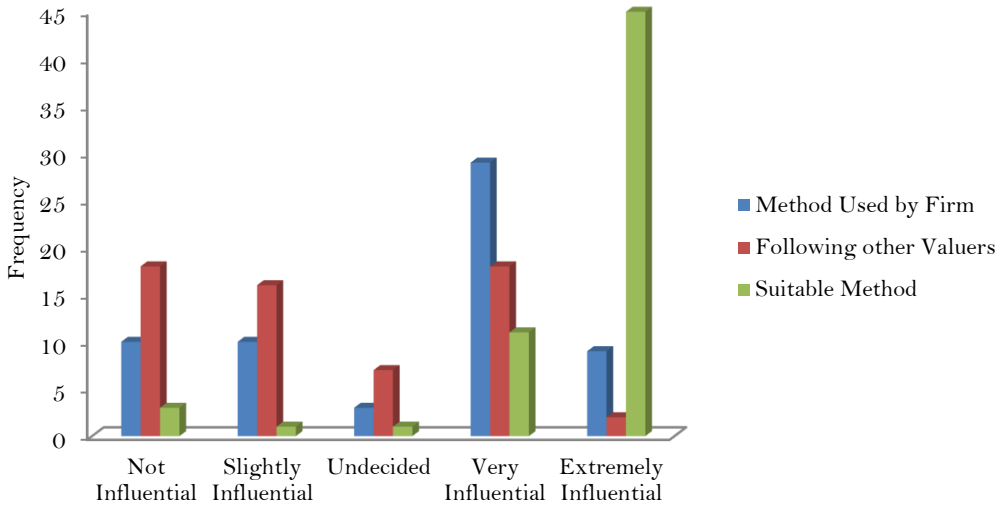

Figure 2. Factors influencing the choice of valuation methods (Author's Fieldwork 2017)

The survey revealed that 60% of the respondent valuers and interviewees based their choice of valuation method on their cognate experience, while 40% of them relied on their previous reports and the enabling statutes since in their opinion, most of the valuations were provided for by the relevant statute. They all discountenanced reliance on other valuers' practices as they contended that this was unprofessional and that professionals that know their worth do not get influenced by other professionals or the party originating the valuation. From the responses, it can be deduced that habit plays a dominant role in fashioning the practice of professional valuers, rather than the innovative application of any modern and esoteric valuation method in solving any valuation problem confronting them.

Shortcomings of the Valuation Methods Chosen

In choosing their method of valuation, valuers use the pre-determined compensation rates method in compulsory acquisition assignments, as this is the method dictated by the enabling law. Though it is not clear how the rates adopted are determined, the policymakers and the International Oil Companies (IOCs) appear satisfied, much to the chagrin of landowners. This lays the foundation for conflict between acquiring authorities and the landowners. Also,

since the valuation method of choice is statutorily determined, the law thus determines the purpose, basis and method of valuation, thereby discrediting professional valuers' competence. This practice reduces valuation to a mere mathematical process without any professional input of valuers. The resultant value for compensation is usually inadequate and fails the test of equity and fairness and does not place the recipients in the position they were before the acquisition.

It was found that valuers usually selected their valuation practice, relying on methods they have previously used, and methods other valuers use, but valuers' training and the practice environment facilitated by the prevailing statutes dictate their attitude to any assignment. The use of valuation methods that satisfy only one of the stakeholders in a valuation problem has resulted in many court cases that tend to deny the landowners their right to compensation in view of the excessive time-lag between the institution of a legal suit and the final ruling on such suits. Also, since all oil-related suits must be filed in the Federal High Courts at very high costs, the poor landowners hardly possess the necessary funds to prosecute such cases and thus feel deprived. The feeling of deprivation results in valuers been discredited and the natives adopting hostile attitudes that threaten the security of the region where oil is prospected and produced.

Presence of an underlying research approach

Suffice to say that the process of value determination for a property is analogous to the research process wherein a new theory is either being generated, tested or deployed towards gaining an understanding of a contemporary phenomenon. This being the case, extant approaches adopted for value determination are expected to conform to any of the research approaches as this will confer validity to the final value. As reiterated previously, various research approaches are available to the researcher (valuer). According to Saunders et al (2016), three basic approaches for theory development are in existence, namely abduction, deduction and induction.

In another study, Blaikie (2007) adds another approach to the previously identified approaches; retroduction. The four approaches mentioned have distinct ways of engaging with the theory development process. In Table 2, a comparison of the aims of these distinct approaches is rendered.

	Induction	Deduction	Retroduction	Abduction
Aim	This approach is used in situations where the researcher is intent on establishing universal generalizations for explaining observed patterns (Theory development).	This approach is used for testing existing theories to eliminate false ones and validate the surviving ones (Theory Testing).	Using this approach, the researcher seeks to discover the underlying mechanisms which can be used to explain observed occurrences.	This approach is used to understand social life in terms of the motives of social actors and knowledge.

Source: Blaikie (2007)

Following from Table 2, the situations wherein these approaches can be suitably deployed can be easily deciphered. Also, the differences between these approaches are clearly articulated. Impliedly, the differences observed in the aims of these approaches influence the processes through which they are deployed in the development of new theory.

Whereas the inductive approach (induction) commences with data gathering and analysis concerning the phenomenon being understudied, it climaxes at the observation of patterns in the data being analyzed. These patterns assume the status of new theories and are subsequently used in achieving generalizations. Deduction (deductive research) involves the identification of an extant theory (observed regularities), the development of a hypothesis based on that theory and, subsequently testing of that hypothesis to ascertain its

credibility. On the other hand, abduction involves the discovery of everyday lay concepts, meanings and/or motives and the development of a technical account from these facets in a manner suggestive to sensemaking using an extant theory, and ultimately, extending the theory, which was deployed in making sense of the everyday lay accounts, allowing for testing in an iterative manner. Based on Blaikie's postulation, the retroductive approach deals with the documentation and modeling of observed regularities concerning the traits associated with a mechanism, the construction of hypothetical models of the observed mechanism and, identification of the actual version of the mechanism based on extended observations or simulations (experiments).

Based on the foregoing, it can be deduced that the pre-determined compensation rates method of determining the value of contaminated wetlands bears a semblance with the deductive approach to theory development. This conclusion was arrived at after a close perusal at the process of theory development associated with the approaches presented previously. In the pre-determined compensation rate method, the rates payable for various items are determined by the relevant statutes and thus, assumed to be extant theory. These rates are the applied the valuer during the value computation exercise, often with little or no consideration for contextual peculiarities which may influence the adequacy or otherwise of the compensation value being arrived at.

For compensation to be adjudged fair and adequate, the valuer as a thinking person is expected to be able to bring his/her professional expertise to bear in appreciating the dichotomy between different cases and apply professional judgement in the determination of final value. This remains a probable panacea for the challenges encountered in actualizing adequate compensation rates for the owners of contaminated wetlands in the Niger Delta region. In the next section, this utility of the abductive approach in facilitating this proposition is proposed.

A case for the adoption of an abductive research approach driven valuation framework

According to Awuzie and McDermott (2017), the abductive research approach seeks to deploy relevant theories in a pragmatic manner towards engendering an in-depth understanding of everyday lay accounts and subsequently developing a construct based on such understanding. Continuing, they affirm that such constructs are continually tested in an iterative manner to allow for the attainment of consistency of interpretations deduced from the constructs as it concerns the lay accounts (phenomenon) being understudied. They argue that the abductive approach comprises of a juxtaposition of deductive and inductive approaches thereby allowing for a critical appraisal of the emergent theory during the development process. In addition, this implies that the abductive approach is not a standalone approach like the inductive and deductive strands and this supposition further reinforces the credibility of the approach.

Buttressing the completeness of the abductive approach when being applied for theory development, Salvatore (2014) and Svennevig (2001) identified three aspects of the abduction approaches, namely; the knowledge produced by abductive generalization is local and contingent as it concerns the situated set of occurrences comprising the case, namely;

- An understanding of A in terms of the contingent event/entity according to which C ceases to be surprising (i.e. it is understood); such understanding implies three intertwined epistemic operations: making the salient occurrences pertinent, and backgrounding the others, (abduction)
- Establishing a pattern for observed salient occurrences, and a network of connections between them, (induction) and;
- Reconstructing their occurrence in terms of retrieving the causal occurrence (deduction).

Both authors further reiterate the fact that these three steps are interlinked and result in sense-making (Svennevig 2001, Salvatore, 2014). Therefore, any deployment of abduction will be supported by the evidence which have been obtained through deductively and inductively oriented arrangements (Lipscomb, 2012). Suffice to reiterate that whereas deduction serves as the 'process of checking theories; induction serves as the process of checking the emergent hypothesis whilst abduction is a method for their discovery" (Levin-Rozalis 2000: 422)

Bringing this understanding of the concept of evaluation, a concept which shares semblance with value determination, Levin-Rozalis (2000) aligns with the perspective of Charles Sanders Peirce (1839-1914) on the notion that the adoption of a new hypothesis by a scientist, researcher or, for the purposes, a new value by a valuer is as logical a process as deduction or induction and can be referred to as abduction. The valuer, much like the scientist working through a process of discovery, raises hypotheses that stem from the field being evaluated. Furthermore, Salvatore (2014) described abductive approach to theory development as a form of knowledge building aimed at producing a local model of the phenomenon at stake (here, the contextual peculiarities of the contaminated wetland and the nature of rights existing within it) starting from the empirical occurrences and grounded on a general system of knowledge (the heads of claim as stipulated by the extant statutes).

This advocacy for the use of this approach to the determination of the valuation of contaminated wetlands is buoyed by the work of Levin-Rozalis (2000) wherein the shortcomings of inductive and deductive approaches in facilitating successful project evaluation exercises are buttressed. According to Levin-Rozalis (2000: 424), "the research logic of abduction can easily be applied to the process of programme/ project evaluation and to the analysis of the data that are gathered in such a process. The evaluator is inside a field of facts that he is examining. He sees phenomena, he sees events, but he cannot yet explain their significance or importance. He posits assumptions. He raises questions for examination. These assumptions and questions arise from the field being evaluated, not from phenomena with known variability, and not from any theory." Undoubtedly, the process described by this scholar appears apt for the conduct of valuation exercises, especially if the term 'evaluator' is transformed into 'valuer'. Applied to the valuation context, the valuer will be expected to approach the valuation task, with prior knowledge of the pre-determined compensation rates, by conducting an examination of the contaminated site, pose questions based on the observations made on that site and to allow the peculiarities of the site under examination to inform an initial judgement on how much a fair and adequate compensation will be. In the aftermath of this initial judgement, the valuer will test the emergent figures in a manner that symbolizes an oscillation between the deductive (pre-determined compensation rates) and the inductive (evidence from similar valuation exercises) approaches to arrive at the final compensation amount which will indeed be deemed equitable and fair to the communities involved.

5. CONCLUSION AND RECOMMENDATION

This study set out to explore probable factors undermining the extant value determination processes of contaminated wetlands in the Nigerian Niger Delta for compensation purposes. This inquest became imperative due to the burgeoning incidence of restiveness resulting from complaints about inadequate and unfair compensation being paid to host communities over polluted wetlands. Contamination of wetlands has become a common occurrence in the Niger Delta region as a result of the oil and gas exploration activities which are carried out within that geographical context. A multiplicity of studies has sought to investigate the reasons behind such agitation against the compensation amounts paid to the host communities. Findings from these studies have mainly attributed the incidence of inadequate compensation to the nature of valuation methods used, the restrictions imposed by relevant

statutes and the use of unqualified valuation professionals. Other studies have also identified the connivance between valuation professionals and the clients-in this case, the IOCs, as another hindrance. However, none of these studies has sought to explore the processes which culminate in the determination of value from a theory development approach- with the final compensation value being ascribed the status of an emergent theory. This is the gap which this study seeks to bridge.

In this study, the art and science of valuation are likened to a research process leading to theory development. The extant methods for value determination are analysed from the prism of theory development approaches within the research realm, i.e., induction, deduction, abduction and retroduction. It was realised that the most dominant valuation method (pre-determined compensation rates method) used by valuers during the valuation of contaminated wetlands for compensation was informed by the deductive approach. This implied that the valuer, just like the researcher, had to be confined to the pre-determined rates during the computation of claims and not the contextual peculiarities of the contaminated site and the host communities. It is believed that this observation constituted a major shortcoming of the value determination process.

Upon a review of the different approaches, this study makes a case for the adoption of abduction as a more suitable approach as it does not negate the benefits of the pre-determined rates but rather uses these rates to test the assumptions and experiences gathered from the contaminated sites. This study holds considerable implications for members of the valuation community and relevant stakeholders working towards achieving a peaceful resolution of agitations concerning unfair and inadequate compensation in the Niger Delta. Further studies should be conducted to further test this proposition and to possibly, develop an actionable framework for transforming the valuation process to accommodate the features of abduction as highlighted in this study.

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