Sustainable Public Housing Delivery in Nigeria: A Conceptual Stakeholder Management Model

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Abstract
In this study, we introduce a conceptual Housing Stakeholder Management Model that transforms institutional attitudes towards sustainable housing delivery. The essence is to promote a sustainability culture in housing delivery that meets safety and affordability needs of the majority. This exploratory study utilized data from 385 real estate professionals and policy makers. Data was analyzed qualitatively with Scissor-Sort Technique and TEXTPACK, and quantitatively with One-Sample Kolmogorov-Smirnov Test and Spearman Correlation. The findings advance the Model’s effectiveness in identifying stakeholder interests and establishment of a sustainability framework of engagement. Strength, Weakness, Opportunity, and Threat analysis was used in validating the Model.

Keywords: Stakeholder Management; Stakeholder Management Model; Sustainable Housing Delivery; Social Responsibility Management; Public Housing
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1. Introduction
Stakeholder management was first touted by Freeman (1984) and relies on a conceptual foundation of value creation through a cultivation of a network of relationships between the organization, decision makers and customers within the internal and external environments. Through the historic origin of the stakeholder discourse in (Freeman, 1984), its management was developed as a response to challenges faced by organizations in meeting current environmental demands (Freeman and McVea, 2001). One key environmental demand facing public and private real estate organizations is the delivery of sustainable urban housing with its attendant externalities to virtually all sectors of the global economy.

The sustainable housing delivery concept finds its premise in Goal 11 of the United Nations Sustainable Development Goals (2015) which targets accessibility to adequate, safe and affordable housing and basic services to all, through a “direct participation structure of civil society in urban planning and management”. The direct participation indicator of this global charter introduces stakeholder management as a key proxy for achieving sustainability. Indeed, this thought is shared in literature with an increasing number of studies Carroll (2017); Ewurum, Egom and Ogbeiwe (2019), Harrison, Freeman and Sa de Abreu (2015); Barrett, Oborn and Orlikowski (2016) recognizing this approach in achieving sustainability through the critical success factors of stakeholder identification, stakeholder engagement and stakeholder conflict management.

What has emerged from a review of these studies is an underlying argument which suggests that a harmonization of interests becomes essential as the interpretation of project success differs with each identified stakeholder. Following this espousal, stakeholder management framework thus implies a strategic approach of managing the expectation and participation of those affecting and are affected by project planning and implementation phases. Globally, nations such as Britain (Bal, Bryde, Fearon and Okie, 2013), Australia (Lingard, Bismas, Cooke and Cooper, 2009) and Canada (Herazo, Lizaralde and Paquin, 2012) have effectively applied this framework in the attainment of sustainable housing delivery.

Unfortunately, the quantitative and qualitative housing problems across Nigeria is an indication of a failure to benchmark this. Evidence from literature (Ewurum et al, 2020; Ifediora, Igwe and Ukpere, 2015) states as much and exposes that Nigerian public housing providers have instead adopted a top-down approach (instead of a build-up approach) to public housing delivery, with little or inadequate input from stakeholders. Information from Exhibit I on the stakeholder identification structure for public housing delivery in Nigeria significantly corroborates this assertion.
Table 1: Stakeholders in Public Housing Delivery in Nigeria

| REGULATORS | FINANCIAL INSTITUTIONS | DEVELOPERS |
|------------|------------------------|------------|
| CBN        | FMBN                   | Federal Housing Authority |
| FEDERAL MINISTRY OF LANDS AND URBAN DEVELOPMENT | 99 Primary Mortgage Institutions | 36 State Housing Corporations |
| FEDERAL MINISTRY OF HOUSING SECURITIES AND EXCHANGE COMMISSION | 24 Deposit Money Banks | 36 State Ministry of Housing |
|            |                        | 36 State Ministry of Lands and Urban Development |
|            |                        | 80 Registered Real Estate Developers |
|            |                        | 53 Insurance Companies |

Source: Pison Housing Company (2010) in EFInA and FinMark Trust (2010). *Overview of the housing finance sector in Nigeria.* retrieved from https://www.efina.org.ng/wp-content/uploads/2018/12/EFInAOverview-of-the-Housing-Finance-Sector-in-NigeriaAug-2010.pdf in May, 2019.

Keeping the contents of Table 1 in view, it is imperative that we recall Freeman’s (1984) Stakeholder Identification Map for large organizations (and we assume authoritatively that with a population of over 170 million, Nigeria’s public housing provider falls within this category). Exhibit 3.1 in Freeman (1984:55) identifies such stakeholders as owners, financial community, activist groups, customers/end-users and their advocates. Others are unions, employees, trade associations, competitors, suppliers, government and political groups. We go further with the inclusion of the academia (Freeman, 2006), public relations consultants and transportation planners as stakeholders in public housing delivery. Lending credence, Clarkson (1995) identifies stakeholders in public administration as “the government that provide infrastructure, and to whom obligations may be due; and the communities who are beneficiaries of the infrastructure, and liable to meet those obligations”.

Whereas Table 1 identifies a number of these groups especially with its inclusion of professionals, other stakeholders such as the end user, unions, academia, civil society, transportation planners, suppliers and political groups are conspicuously absent. While recalling Freeman’s et al. (2001) reference of stakeholder management as response to current environmental challenges, it is distinctly clear in Table 1 that Nigerian public housing providers have a warped perspective of requisite stakeholder identification for addressing the current unsustainable public housing delivery in the country. No wonder the system is characterized by wrong perception of the housing needs of low income earners (the vast majority of urban dwellers in Nigeria) with many allocated housing units located kilometers away from functionally active boundaries where socio-economic activities take place within the cities (Elegbede et al, 2015).

Since one cannot engage who one has not identified, it could be rightly argued that public housing providers in Nigeria generally, and South Eastern Nigeria in particular, have poorly espoused stakeholder management strategies in the planning and implementation of sustainable housing. This is symptomatic of a lack of market segmentation, targeting, differentiation and positioning strategies (Ifediora et al., 2015). While we identify with this contention amidst the yearning for change, the paucity of empirical response through any form of Stakeholder Management Model for this purpose becomes rather worrying, and thus advocates for the formulation of such. This is not only because of complexity in the engagement strategy of public housing providers, but also for its implications for a culture of sustainability in the housing industry.

Therefore, in responding to this challenge, we introduce a conceptual Housing Stakeholder Management (HSM) Model that integrates the critical success factors of stakeholder management, such as social responsibility management (Ewurum, 2019; Prager and Freese, 2009; Reed, 2008), stakeholder conflict management (Ewurum et al., 2019; Schermerhorn, 2003), stakeholder identification (Ewurum et al. 2019b; Walker, 2008; Jepsen and Eskerod, 2008; Freeman, 1984); and stakeholder engagement strategy (Ewurum et al., 2019; Ewurum et al., 2019b; Aaltonen, 2008; Olander, 2007). These are consistent with the indicators for achieving sustainable development in the UN SDGs (2015) and thus provides a roadmap for the attainment of safe, adequate and affordable targets in public housing delivery.

1.1 Study Area
The study examined public housing estates in the South East Nigeria States of Abia, Anambra and Enugu. Figure 1 shows the location of the South East geographical zone in Nigeria.
Figure 1: South East Geopolitical Zone of Nigeria
(Department of Land Surveying and Geoinformatics, University of Nigeria Nsukka, 2019)

Figure 1 shows that the South East of Nigeria (illuminated with a red borderline) comprises five states as follows - Abia, Anambra, Ebonyi, Enugu and Imo States. It is home to predominantly ‘Igbos’ whose language, Igbo, is one of the three most widely recognized and spoken languages in the country. The three States under study are illuminated with green (Anambra), yellow (Abia) and blue (Enugu). Figure 2 shows the geospatial distribution of public housing estates under study.

Figure 2: Geospatial Distribution of Public Housing Estates in Enugu (GIS Lab, 2019)
Figure 2 shows the geospatial data of public housing estates under study. The map shows the road and rail network connecting the estates. The estates are identified by a blue house-like marker which reveals that the bulk of the estates are located in the city center.

2. Review
2.1 Stakeholder Management
Freeman (1984) avers that stakeholder management is the process of integrating the interests and relationships of “those affecting or are affected” in a way that guarantees the long-term success of the firm. This entails the identification and engagement of influential groups in a conflict-free manner that guarantees goal attainment. It is therefore averred that stakeholder management is the strategic identification, engagement and harmonization of the interests of groups vital to project planning and implementation success. From this stakeholder management conceptual framework, an agglomeration of stakeholder identification, engagement and conflict management can be detected.

A. Stakeholder Identification
Freeman’s (1984) stakeholder management theory identifies the stakeholder as “those affecting or are affected by” the business of the organization. Fontaine, Haarman and Schmid (2006) observe a point of exploitation in Freeman’s stakeholder identification as affectors and affectees. They argue that such phrase opens up the organization to those who wrongly claim to be stakeholders due to a possession of a somewhat affecting power. This implies that a firm’s endeavour may affect or be affected by a group that cannot be termed ‘stakeholders’; and thus, begs the question – who then decides who is a stakeholder or who is not?

It is important to make this clarification due to our dispute of Nigeria’s housing stakeholder identification process which has not and does not identify the end-user as a stakeholder. It can be argued that if this decision falls under the purview of the organization, then the end user is not a stakeholder in the Nigerian housing industry. Still, relying only on the discretion of the organization on who the stakeholder is, may seem lazy. The reason is that the organization may err in omission or commission of certain groups in identifying its own stakeholders.

Following this, the stakeholder foundation identifies it as “those groups without whose support the organization would cease to exist” [Stanford Research Institute (SRI), 1963 in Freeman, 1984]. Even Freeman (2004) in Fontaine et al. (2006) has observed the flaw in the affector-affectee stakeholder paradigm and has amended his approach to an identification of the stakeholder as “groups … vital to organizational survival and success”. This position forms the fulcrum of stakeholder identification and as well stands as stick to beat the back of organizations who do not follow this model.

While the model may arguably be applicable to various industries, it would be naïve to suggest that it would always produce the same category of stakeholders, as the results would naturally be a function of the uniqueness of the industry under consideration. With the Nigerian housing industry under advisement, Yang, Shen and Ho’s (2009) stakeholder identification for housing delivery comes to mind. This is illustrated in Figure 3.

![Figure 3: Categorization of Housing Project Stakeholders](source: Yang, J., Shen, Q.P. and Ho, M.F. (2009a).)
Figure 3 shows the categorization of stakeholders that are crucial to effective delivery of public housing, and since each of them have varied contribution levels, strategic stakeholder engagement becomes pertinent.

Empirically, Ifediora et al. (2015) examined “appraised the adequacy of the application of customer-driven marketing strategies to the Nigeria National Housing Fund (NHF) scheme” using descriptive and exploratory research designs. The population of the study comprised 201 management staff and non-management staff of NHF. Utilizing a structured questionnaire for data collection, Analysis of Variance (ANOVA) was used for analysis. It was found that the “application of market segmentation, targeting, differentiation and positioning by the NHF implementers was not adequate (Fcalc = 95.239, p = 0.000 < 0.05”). Following the finding, it was concluded that “there was a low level of application of customer-driven marketing strategies such as stakeholder identification in the National Housing Fund (NHF) implementation”.

**B.Stakeholder Engagement**

This stems from the stakeholder theory of integrating all influential interests in actualization of corporate objectives. While stakeholder analysis is pertinent to effective stakeholder engagement, Hammad (2013) asserts that stakeholder engagement is the communication with, involvement and development of relationships with stakeholders. By inference, it transcends periodic updates rendered to stakeholders towards a culture of stakeholder participation in decision making. The former can be referred to as the “information model”, while the latter is a combination of “response and involvement models” (Grunig and Hunt, 1984).

The response and involvement models of engagement see the organization as more of a learning organization. Bratianu (2015) posits that a learning organization is one which promotes an adaptive culture of innovation through a creation and retention of information from the environment. Therefore, through stakeholder engagement, the organization is able to obtain useful information from stakeholders which can be used to amend, sustain or revolutionize organizational processes towards an outcome that is satisfactory to the combined interests. This is based on the concept that all parties capable of influencing value creation and consumption are responsible for the final outcome (Freeman, 1984).

Usadolo and Caldwell (2016) investigated stakeholder engagement in a rural community project named Nguni Cattle Project, that uses Participatory Rural Appraisal (PRA) as operational focus. The study conducted an analysis of “participatory patterns of stakeholders” with a view to identifying stakeholder locations for effective contact. The research instruments were interview, document analysis, and observation. It was found that promotion of mutual understanding was achieved as a result of sustained collaborative relationships with stakeholders.

Eyiah-Botwe, Aigbavboa and Thwala’s (2016) work was part of a Doctor of Philosophy dissertation (Ph.D.) on “development of sustainable stakeholder management framework for construction projects”. The study was qualitative and concepts picked from literature were developed into a conceptual framework. The framework was validated with “face to face semi-structured interviews involving ten key stakeholders”. Amongst the findings was that “stakeholder management and sustainability concepts were yet to embrace”.

**C.Stakeholder Conflict Management**

Conflicts are generally an inevitable part of human interaction (Nwakoby, 2004) and the usual diversity in stakeholder networks stresses the need for conflict management within the stakeholder management discourse. Hammad (2013) opines that conflicts among external stakeholders may be the most difficult to resolve because of their diversity and lack of established procedures for tackling them. So, analyzing the conflicts and coalitions among stakeholders is an important step for stakeholder management (Freeman et al., 2007). This is achieved through resolution of disagreements by institutionalized provisions and regulative procedures for dealing with conflicts whenever they occur (Otite, 2001).

The usual waste of time and resources accorded with dispute resolution implies that this definition is not acceptable. Why allow disputes to occur in the first place? It is pertinent that stakeholder conflict management is applied as mainly a calculated action rather than reactionary if disputes must be avoided. Lending credence, Robbins (2001) avers that stakeholder conflict management is the use of resolution and stimulation techniques to achieve the desired level of serenity within a project life cycle. Okoroafor (2012) cited these resolution and stimulation techniques as mutual problem solving, collaboration, avoidance, smoothing and compromise through skillful overtures. This suggests that public relations professionals and Alternative Dispute Resolution experts are crucial players in stakeholder conflict management, and should be included as stakeholders of public housing delivery.

Adetunji and Wahab (2015) researched on the predictors of “conflict and resolution strategies employed in the management of Community-Driven Projects (CDPs) in selected public and private estates in Lagos State, Nigeria”. The sources of data were primary and secondary as obtained from a “population of landlords and households in both the Lagos State Development and Property Corporation (LSDPC) Ijaye-Ogba Estate in Agege Local Government Area (LGA) and Rufus Lanre-Lanayan Estate in Kosofe LGA”. Descriptive statistics were utilized in data analysis. It was found that “conflicts were in the form of quarrel, fight, clashes, and murmuring” while “mediation, negotiation and reconciliation” were the main resolution techniques adopted in the housing estates. The study recommended a stakeholder conflict management strategy that nips conflicts in the bud.
Ampomah and Gyan (2016) explored the “effect of stakeholder conflicts on community development” in Kenyase, “one of the major mining communities in Ghana”. Using qualitative research methods, the study found that conflicts had a significant negative effect on projects. Upon this position, the study recommended that “project managers pay attention to stakeholder relationships in project initiation, design, and implementation”.

**D. Social Responsibility Management**

The study is an attempt to promote a culture of sustainable public housing delivery through a stakeholder management model that guarantees accessibility to adequate, safe and affordable housing and basic services to intended beneficiaries. The social responsibility management dimension of the Housing Stakeholder Management Model is an acknowledgement of the social obligations of organizations to the society they operate in. Basically, it is organizational commitment to sustainable economic development through stakeholder collaboration for improvement in quality of life (Commission of the European Communities, 2003; World Business Council for Sustainable Development, 1999).

The relevance of social responsibility in public housing delivery stakeholder management discourse lies in the premise that it supports government efforts by “achieving strategic development objectives, increasing gross domestic product and offering employment opportunities” (Yang et al., 2009). By this, it serves the purpose of harmonizing profits with improved standard of living. Social responsibility management therefore entails a public housing delivery system that collaborates with stakeholders in achieving development objectives, improving gross domestic product and employment opportunities. Key amongst these development objectives is sustainable housing delivery.

Research by Choongo (2017) investigated the “impact of corporate social responsibility on firm performance” using a longitudinal design on Zambian Small and Medium Scale Enterprises. A population of 153 entrepreneurs was utilized in appraising any change performance as a result of social responsibility over a 12-month period. Upon analysis with SmartPLS Structural Equation Modelling, it was found that corporate social responsibility had a significant relationship with firm performance. This is corroborated by the work of Bijoy laxmi, Jamid and Zillur (2015) on the “impact of CSR on sustainability initiatives of selected Information and Communication Technology companies in India”. The study found that “value creation through CSR and sustainability initiatives had significantly positive impact on the lives of community stakeholders”.

**2.2 Stakeholder Theory**

The Stakeholder theory relies on a consensual foundation of risk mitigation and value creation through collaboration with those that count. It argues that other groups who are not shareholders also matter and need to be integrated so as to ascertain effectiveness of organizational service delivery. This stakeholder integration process embodies firstly, a valid and accurate identification process (otherwise referred to as “the normative theory of stakeholder identification”), secondly an effective engagement strategy (the instrumental stakeholder approach) (Phillips, 2003).

Blattberg (2004), a Political philosopher, advanced an antithesis of the stakeholder theory which was referred to as the “Patriotic Conception of the Corporation”. This view relies on the philosophy that patriotism is a given and all are obligated to patriotically commit to the goal. This position finds support in the work of Mansell (2013), but what it fails to consider is that dissenting interests may not necessarily be unpatriotic but rather based on the delivery of an alternative, yet legitimate approach to the goal. It may be averred then that Blattberg (2004) and Mansell’s (2013) perspective bothers on negligence and may be attributed to the wrong perception of the housing needs of low-income earners, with many allocated housing units located kilometers away from functionally active boundaries (Elegebede et al., 2015).

Given this contention, it is therefore inexplicable that the implementation of the Stakeholder Theory in Nigeria’s housing industry has not been given adequate attention in extant literature. Accordingly, the theory lays a foundation for the testing of the main hypothesis of the study which states that sustainable public housing delivery can be attained through a stakeholder management model.

**2.3 Sustainable Housing Delivery**

Sustainable housing delivery is a subset of the sustainable development construct which focuses on the creation of value that meets today’s demands without compromising on tomorrow’s requirements. It is angled on a framework that measures organizational service delivery from ecological, economic and social security perspectives (Warbuton, 1998 in Ahmed, 2017). International Conference on Conservation and Development (1986) in Ahmed (2017) sees sustainable development as an incorporation of conservation in development that satisfies basic human needs, promotes social justice and equity, enhances self-determination and cultural diversity, and maintains ecological integrity.

United Nations (2015) charter on “Transforming our World... through Sustainable Development” corroborates this view and sustainable housing delivery finds credence in Goal 11. Goal 11 of the United Nations Sustainable Development Goals (2015) has a target of attaining “access for all to adequate, safe and affordable
housing and basic services and upgrade slums” through “a direct participation structure of civil society in urban planning and management that operate regularly and democratically”. We argue that this studied approach for broaching the subject calls for a stakeholder management model that serves as blueprint for an “enduring, balanced approach to economic activity, environmental responsibility and social progress” [British Standard Institute (BSI), 2006] in public housing delivery in Nigeria.

Without mincing words, housing is a very serious issue; and Nigeria’s preponderance of luxurious and high cost public estates in a country adjudged one of the poverty capitals of the world (worldpoverty.io, 2019) is appalling, for want of a more diplomatic reference. Despite being the 6th largest oil producing nation globally, this dastardly misdirected focus and somewhat “wicked” act has created a situation where the housing deficit is in tens of millions (Enghbal, 2008) in a country that builds estates for wealthy individuals who already have tons of houses and landed properties. Indeed, a paradox of achieving so little with so much. What is sustainable in ignoring the hungry and feeding the overfed? Again, what is sustainable in feeding the hungry?

Justly, obtaining a reasonable answer to the first question is beyond the authors of this paper. Perhaps a judicious comeback to the second query argues that firstly, of all man’s basic needs, housing arguably, constitutes and indeed poses the greatest challenge (Ewurum et al., 2017); secondly, a vibrant and buoyant housing sector is “an indication of a strong programme of national investment and indeed the foundation of sustainable economic growth and social development” (Nubi, 2008; Okonjo-Iweala, 2014 in Ewurum et al., 2017). This analogy is in dire need in Nigeria and the credibility lies in a juxtaposition with the fact that demand for housing poses an unprecedented force of pressure emanating from steady population growth and rise in urbanization; and the very rapidly widening gap between housing demand and supply in Nigeria (Ewurum et al, 2017).

The study proposes a model that actualizes a social housing delivery that is safe, respectable, accessible and need-based in consistence with the UNSDGs (2015), Rio-de-Janeiro Summit (1992), Habitat Summit in Istanbul (1996), La Havana Summit (2005). These global charters, of which Nigeria is a signatory, culminated into the “United Nations Habitat ‘Agenda 21’ which has a primary objective of delivering adequate, safe, secure, accessible, affordable and sanitary housing as a fundamental human right” (UN HABITAT, 2006). Arising from this, the HSM Model postulates as follows:

i. Needs assessment significantly improves stakeholder identification
ii. Stakeholder engagement strategy significantly improves sustainable housing approach
iii. Stakeholder conflict management significantly improves social housing delivery
iv. Social responsibility management has a significant positive effect on end user-driven initiatives.

3. Methodology
The study employed exploratory research design through the utilization of focus group discussions to gain insights about the problem. This is adopted in the generation of new ideas through the development of a model, especially where there are few studies of reference (Kothari, 2004). Primary data was obtained from a sample frame of 160 real estate professionals cutting across the public and private sector. These include Estate Surveyors and Valuers from the Ministry of Lands, Housing and Urban Development, Physical Planning Units of Local Governments within the study area, private practice, Real Estate Developers Association of Nigeria (REDAN), the Academia, Federal Mortgage Bank of Nigeria and Securities and Exchange Commission in the selected South East States in Nigeria. The population statistics was obtained from the 2017 Directory of Registered Members and Firms of the Nigerian Institution of Estate Surveyors and Valuers’ (NIESV’s).

Data obtained from focus group discussions was used in the operationalization of the variables of the study. This is shown as follows:

| Stakeholder Management                      | Sustainable Housing Delivery |
|---------------------------------------------|------------------------------|
| i. Needs Assessment (Market Research)       | Stakeholder Identification   |
| ii. Stakeholder Engagement Strategy         | Sustainable Housing Approach |
| iii. Stakeholder Conflict Management        | Social Housing Delivery      |
| iv. Social Responsibility Management        | End User-Driven Initiatives  |

Qualitative analysis of focus group data was done with Content Analysis and Scissor-Sort technique (Krueger and Casey, 2000; Stewart, 2017), while quantitative analysis utilized the One-Sample Kolmogorov-Smirnov Test and Spearman Correlation. Content Analysis was used to establish the dominant theme from the focus group discussions, while the Key-Word-In-Context (KWIC) technique was employed in capturing the context. The study used Scissor-Sort technique for transcript analysis. Thereafter, statistical dispersions from the mean theme were measured with the One-Sample Kolmogorov-Smirnov Test; “where the responses follow a normal distribution with less variances, we reject the null hypotheses”. Spearman Correlation was used to determine the degree of agreement among the academics, professionals and policy makers on the discernible role of stakeholder conflict management in facilitating social housing delivery.
3.1 Model Validation
The Conceptual HSM Model for Sustainable Public Housing Delivery was developed by the study. The model was incorporated with key constructs identified as needs assessment for stakeholder identification, stakeholder engagement strategy, stakeholder conflict management strategy, and social responsibility management. Thereafter, a Strength, Weakness, Opportunity and Threat (SWOT) Analysis was conducted to validate the Model.

4. Data Analysis
Following the recommendations of Krueger et al. (2000) and Stewart (2017), the usual broad range of focus group data was streamlined for clearer interpretation. Data was grouped in accordance with the research questions, after which the extent to which they generated accurate responses were ascertained. From this, systems were developed that categorized dominant and emerging themes. Thereafter, data was analyzed with Scissor-Sort Technique and TEXTPACK for Content Analysis.

4.1 Data Analysis Procedure
From the transcript examination, color-coded brackets were constructed to classify respondents’ contributions in accordance to levels of significance by means of cutting and sorting. This led to the identification of the dominant theme for each research question. The dominant themes were identified by an outsourced pool of six statistical analysts so as to overcome the limitations of Scissor-Sort Technique. To ensure that all biases are expunged, Computer-Assisted Content Analysis was conducted by means of the TEXTPACK software. “The TEXTPACK software uses a theoretically derived dictionary for classifying words and identifying keywords”. KWIC technique served in examining the identified keywords to identify the agreement coefficients.

Quantitatively, Hypotheses one, two and four were tested with One-Sample Kolmogorov-Smirnov Test, while Spearman was used in testing Hypothesis three.

4.2 Test of Hypothesis One
Needs assessment does not significantly improve stakeholder identification.

Table 2: One-Sample Kolmogorov-Smirnov Test

| Needs assessment does not significantly improve stakeholder identification. |
|-----------------------------|-----------------------------|
| N                           | 385                        |
| Normal Parameters           | Mean                       |
|                            | 1.981                      |
|                            | Std. Deviation             |
|                            | 1.26276                    |
| Most Extreme               | Absolute                   |
|                            | .280                       |
| Most Extreme               | Positive                   |
|                            | .280                       |
| Differences                | Negative                   |
|                            | -.218                      |
| Kolmogorov-Smirnov Z       |                            |
|                            | 4.638                      |
| Asymp. Sig. (2-tailed)      | .000                       |

a. Test distribution is Normal
b. Calculated from data

Table 2 shows a Kolmogorov–Simiroiov Z-value of 4.638 (P<0.05), thus, affirming the assertion of the respondents that needs assessment significantly improves stakeholder identification.

4.3 Test of Hypothesis Two
Stakeholder engagement strategy does not significantly improve sustainable housing approach.

Table 3: One-Sample Kolmogorov-Smirnov Test

| Stakeholder engagement strategy significantly improves sustainable housing approach |
|----------------------------------------|----------------------------------------|
| N                                      | 385                                    |
| Normal Parameters                      | Mean                                   |
|                                        | 2.3818                                 |
|                                        | Std. Deviation                          |
|                                        | 1.29979                                 |
| Most Extreme                           | Absolute                               |
|                                        | .314                                    |
| Most Extreme                           | Positive                               |
|                                        | .314                                    |
| Differences                            | Negative                               |
|                                        | -.159                                   |
| Kolmogorov-Smirnov Z                   |                                        |
|                                        | 5.202                                   |
| Asymp. Sig. (2-tailed)                  | .000                                    |

a. Test distribution is Normal
b. Calculated from data

From Table 3, the computed z-value of 5.202 (P<0.05) indicates that stakeholder engagement strategy significantly improves sustainable housing approach.
4.4 Test of Hypothesis Three

Stakeholder conflict management does not significantly improve social housing delivery.

Table 4: Spearman Correlations

|          | PROFESSIONALS | POLICY MAKERS |
|----------|---------------|---------------|
| Spearman’s rho | POLICY MAKERS | Correlation Coefficient (2-tailed) | POLICY MAKERS |
|          |               | N              | N              |
|          | POLICY MAKERS | 1.000          | .905**         |
|          | POLICY MAKERS | .000           | .000           |
|          | N             | 385            | 385            |
| PROFESSIONALS | Correlation Coefficient (2-tailed) | .905** | 1.000 |
|          | POLICY MAKERS | .000           | .000           |
|          | N             | 385            | 385            |
| ACADEMIA | Correlation Coefficient (2-tailed) | .891** | .882** |
|          | POLICY MAKERS | .000           | .000           |
|          | N             | 385            | 385            |

Result in Table 4 shows a significant positive relationship in the positions of academics, professionals and policy makers (p<0.05), and thereby indicates that stakeholder conflict management significantly improves social housing delivery.

4.5 Test of Hypothesis Four

Social responsibility management does not have a significant positive effect on end user-driven initiatives.

Table 5: One-Sample Kolmogorov-Smirnov Test

|          | Social responsibility management does not have a significant positive effect on end user-driven initiatives. |
|----------|---------------------------------------------------------------------------------------------------------|
| n        | 385                                                                                                   |
| Normal Parametersab | Mean                                                                 | 1.8845                        |
|          | Std. Deviation                                                                                       | 1.04327                       |
| Most Extreme | Absolute                                                                 | .283                          |
| Differences | Positive                                                                                           | .283                          |
|          | Negative                                                                                           | -.198                         |
| Kolmogorov-Smirnov Z |                                                                                                    | 6.332                         |
| Asymp. Sig. (2-tailed) |                                                                                                     | .000                          |

a. Test distribution is Normal
b. Calculated from data

From Table 5, the computed Z-value of 6.332 against 1.96 and a significance of 0.000, indicates that the null hypothesis should be rejected and alternate accepted. Thus, an indication that social responsibility management has a significant positive effect on end user-driven initiatives.

5. Results

i. Needs assessment significantly improves stakeholder identification (Z = 4.638; P<0.05).

This result is complementary with focus group results which show that needs assessment was the dominant theme in stakeholder identification for sustainable public housing delivery.

ii. Stakeholder engagement strategy significantly improves sustainable housing approach (Z = 5.202; P<0.05).

This result corresponds with focus group result that stressed the imperative of consistent, clear and logical communication processes for effective stakeholder in the delivery of sustainable public housing.

iii. Stakeholder conflict management through mutual problem significantly improves social housing delivery in Nigeria (9.299).

iv. Social responsibility management has a significant positive effect on end user-driven initiatives (P<0.05).

6. Conclusion

Planning and implementing sustainable public housing delivery is clearly complex and involves a number of linked processes over a significant time period, and a network of participating actors and stakeholders. Approach employed by housing providers in Nigeria is not enough to drive a sound stakeholder identification strategy, stakeholders have to be identified and communicated to effectively. Combined effort through stakeholder engagement is a significant predictor of sustainable housing approach. A culture of identifying and accommodating stakeholder interests is a prerequisite for managing stakeholder conflicts, but this must be achieved through mutual problem solving. When housing providers show this level of social responsibility, end-driven user initiatives are
sure to be achieved. On the basis of the research findings, the study concludes that a stakeholder management model is significantly needed for sustainable public housing delivery in South East, Nigeria.

7. Recommendations
Based on the findings, the following recommendations were made:

(i) Successful integration of market research strategies in the identification of stakeholders through needs assessment is strongly recommended by the study. This two-way information gathering will significantly alleviate and address the misunderstanding problems witnessed in the housing sector over the years.

(ii) Sustainable development includes and integrates both the development of people and their situations and standards of living. Such development cannot be delivered to passive recipients – it requires active participation and a partnership approach. The study recommends a stakeholder engagement mantra that supports planning with the people for the people. This is achieved through the engagement of stakeholders at all levels of the formulation and implementation phases of the project.

(iii) The study recommends a rent-to-own scheme where housing is provided to low income earners who pay back a subsidy over a number of years through rent, with the option to purchase the house at some point at a subsidy. In the United States, this is known as rental purchase.

(iv) In a bid to achieve end-user driven initiatives through social responsibility management, the study recommends that government should embark on offering fiscal incentives to producers of building materials and aggressive training of graduates in the relevant field to increase their proficiency in the production of building materials. This also includes sending candidates to countries where some building materials are imported from so as to ensure that Nigeria commences the production of these materials. It is hoped that this is going to drastically reduce construction costs and make property development cheaper for private and public real estate investors.

8. Contribution to Knowledge: Conceptual Housing Stakeholder Management (HSM) Model
The study contributes to knowledge by extending the measurement of housing delivery stakeholder management to include proxies such as needs assessment and social responsibility management. This has helped increase the body of knowledge on the discourse. The study fills the lacuna in extant literature on the role of formal stakeholder conflict management process in ascertaining the different variations of needs and interests in the housing market. As shown in the review, research about engagement concerns a narrow view of engagement activity and leaves a significant gap in the literature about transformative engagement as described by Cornwall (2008). We also showed the efficacy of the process and outcome of stakeholder engagement to both the provider and the target base.

Very conspicuous in its minimal existence in extant literature is the formulation of stakeholder management model for sustainable public housing delivery in Nigeria. The study addressed this gap in the literature through the formulation of a stakeholder management model for sustainable public housing delivery named Housing Stakeholder Management (HSM) Model in Figure 1. This conceptual Model argues that involving the end-user, locals and other stakeholders in development activities is “considered both an end in itself, and a process through which regeneration outcomes are delivered”.

8.1 Development of a Stakeholder Management Model for Sustainable Housing Delivery in South East Nigeria: Introducing the HSM Model.
The conceptual model proposed by the study takes effort to devise a sustainable approach to the delivery of public housing in a developing country. The model is integrative, in its advocacy for stakeholder recognition and collaboration in public housing delivery. From the review of related literature to the empirical results obtained from the focus group discussions and expert survey, the dominant reason identified for Nigeria’s urban housing deficit is a top-down approach to housing delivery as against a bottom-up approach which would have ensured sustainable housing delivery through effective stakeholder management. The research employed descriptive research design to portray the situation as it exists in the industry, and embarked on an exploratory study to develop fresh ideas for addressing the problem. The implication of the findings is that a fresh approach is needed to address the housing issue in the country. Our response to this call is the formulation of a Stakeholder Management Model for Sustainable Public Housing Delivery in Nigeria, named Housing Stakeholder Management Model.

The Housing Stakeholder Management Model is an integration of key constructs as:

a. Needs Assessment Stakeholder Identification
b. Stakeholder Engagement Strategy Sustainable Housing Approach
c. Stakeholder Conflict Management Social Housing Delivery
d. Social Responsibility Management End User-Driven Initiatives

The model was developed by the study from findings obtained from the review of related literature and empirical results obtained from the field. It was not feasible to adapt an existing model as the holistic representation of the situation because it was found that the unique situation of each country’s housing market implies that what works in Country A may not holistically work in Country B. So, the solution becomes more tenable where tit bits
learnt from different approaches taken by countries with better sustainable housing delivery records are brought together and adapted to suit the Nigerian environment.

The HSM Model encapsulates the proxies postulated by the study in a network illustration of the path from the Mission of Housing Providers to the actualization of the Vision of sustainable housing delivery. The HSM Model is shown in Figure 4:

![Figure 4: Conceptual Housing Stakeholder Management Model for Sustainable Public Housing Delivery](image)

Figure 4 shows the Conceptual Housing Stakeholder Management Model with key constructs identified as needs assessment for stakeholder identification, stakeholder engagement strategy, stakeholder conflict management strategy, and social responsibility management; as is evident in the research hypotheses, and the review of related literature.

The Conceptual HSM Model proposes that housing delivery projects start with a Vision and Mission and ends at the actualization of the Vision. From the Mission, the model suggests a two-way approach. Firstly, through market research, stakeholder identification is achieved. Secondly, this approach is consolidated by another which involves a needs assessment programme which goes through development communication in arriving at effective Stakeholder Identification. The model shows that both approaches work simultaneously. One could notice that the development communication arrow is two-pronged which signifies the two-way communication process of development communication which is crucial as effective identification of stakeholders is a precursor for further
needs assessment.

The movement to the right of the model suggests that to arrive at Stakeholder Engagement, a needs assessment is needed in a bid to formulate an action plan which will dictate stakeholder mapping. Through stakeholder mapping, segmentation takes place to identify the interests of the stakeholders. The stakeholder interests are then considered in the Stakeholder Engagement. It is essential to note that at this stage, the contributions of stakeholders are brought to fore as yardstick for engaging them.

From the HSM Model, the Stakeholder Identification, Needs Assessment, and Stakeholder Mapping Triangulate has at its height – Stakeholder Analysis. The model argues that the employment of development communication and formulation of an action plan is consistent with the analysis of stakeholders towards effective mapping of stakeholders. Thus, stakeholder mapping here helps in the formulation of a Stakeholder Engagement Strategy that will inform the engagement of stakeholders in the project.

This Conceptual Model also stipulates that when the project is determined and the stakeholders identified, an end user-driven initiative-themed Gap and Deficit Analysis be conducted in a bid to generate a Social Responsibility Management programme for the project. Since the goal is sustainable housing through safe, affordable and supported housing delivery, serious thought was given to the reduction of building material prices, as an angle of reducing cost of construction towards the provision of social housing.

At this point, the HSM Model proposes that priority should be given to capacity building and enacting of friendly policies that promote local content. It contends that when this is done, it is going to impact the engagement of stakeholders towards plan formulation, and also directly impact project execution and implementation. The Model admits that realistically, in the engagement of stakeholders, two groups are likely to emerge – the supporters and the opposers. Where the process creates only supporters, the engagement process leads directly towards the plan formulation for sustainable delivery of housing projects.

In the event that certain stakeholder groups oppose the engagement process so far, the model identifies this scenario as stakeholder conflict and this is sent for resolution at the Stakeholder Conflict Management Center. Recall that stakeholder conflict is a situation where the influencers and beneficiaries of a project fail to agree on certain aspects of the project, or their views are intertwined in such a manner that more clarity is needed. At this juncture, the conflict catchment areas are identified and treated by the employment of mutual problem-solving techniques. Through product positioning and differentiation, effort is made towards the implementation and execution of a housing project that is objectively attractive to the target market/base. This invariably leads to the goal and actualization of the vision of Sustainable Public Housing Delivery.

A Strength, Weakness, Opportunity, and Threat (SWOT) assessment of the Model shows that the honest and serious application of stakeholder management strategies to public housing delivery in Nigeria will ensure that the housing needs of the masses will be adequately addressed and taken care of by government in lesser time.

9. Practical Implication
The study advocates for collaborative and participative approaches that recognize the end-user as a stakeholder in public housing delivery. Public housing providers who adopt this argument stand better chance of achieving economic and social sustainability in the public housing delivery system.

10. Conflict of Interest
The authors declare no conflict of interest.

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