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GLOBAL SLUM UPGRADING PRACTICES: IDENTIFYING THE CONTEMPORARY CHALLENGES

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ABSTRACT

Over the years, human settlement experts have utilized a number of intervention strategies for integrating slums and informal neighbourhoods into their larger urban context. Yet these practices are continually trailed by challenges and reactions from built-environment professionals and other stakeholders. It is therefore imperative that the quest for an acceptable approach to slum intervention is yet to abate. A literature review methodology was adopted to identify and appraise the various intervention models that were practiced in some developing nations. Although slum upgrading option was adjudged to be the current global best practice, it is still besieged by several imperfections. Some weaknesses and challenges that are applicable to developing countries, particularly Nigeria were identified in this study. The paper suggests policy measures for mitigating these challenges.

Keywords: In-situ upgrading, participatory upgrading, slum improvements, slum prevention, slum upgrading.

1. INTRODUCTION

In the last 20 years slum upgrading has increasingly been regarded as the most effective method for mitigating the problems faced by slum dwellers (UN-habitat, 2010). The goal is to integrate the communities into their larger urban context. The outcomes are usually experienced at the level of the individual, neighbourhood and urban housing. This study is based on literature review methodology, which is generally referred to as non-contact, desk-based, secondary or library-based research. Thus the study examined what the research literature reveals about slum upgrading practices across the developing world in order to identify current debates and challenges confronting urban planners, architects, residents, governments and other urban management experts and diverse stakeholders. Concepts, points of view and evidence-based case studies were explored to find out how they support or contradict the knowledge-base surrounding slum upgrading practices and challenges.

A critical analysis of the gaps in knowledge was used as a guide to point the way to the future by providing insights that have been neglected or passed over in the past.

The procedure adopted involved careful secondary analysis and evaluation of explicit themes on slum upgrading. Non-structured qualitative analysis was applied to make the review of identified themes distinctive. Hence the literatures that were collected on selected themes were subjected to logical analysis, reasoning, synthesis and dialectical thinking. The paper begins by identifying different intervention models that were in vogue for dealing with slum improvements, until a few decades ago. Thereafter, the paper takes an overview of slum upgrading strategies that many scholars regard as the contemporary best practices. Finally, the paper identifies some weakness and challenges of slum upgrading that are applicable to Nigeria and other developing nations.

2. LITERATURE REVIEW

2.1 Types of Interventions Dealing With Slum Improvements

UN Habitat (2003) has identified the most common intervention styles for dealing with slums as follows: Negligence (Benign neglect, laissez fair), eviction and clearance, insitu upgrading, enabling policies and resettlement. Responses to slums have changed over the years. Policies that aim at benign neglect, forced eviction, clearance and involuntary resettlements have become very unpopular.

Forced eviction and clearance model is based on the concept of redevelopment of slums and requires the resettlement of its residents. In many countries, slum eviction is applied as an urban re-engineering tool by the government. Evidence of slum eviction practices abound in a number of countries. Between January 18 and 21, 2013 an estimated 1,512 households (about 5000 persons) were evicted from Ejipura, Bangalore, South Africa. In Johannesburg, about 10,000 people were evicted between 2002 and 2006 (Masses, 2014). Forced eviction and clearance model was witnessed in Harare, Zimbabwe in a 2005 exercise tagged Operation Murambatsvina (Restore Order). The operation was characterized by demolition and burning of 92,460 houses and the displacement of 700,000 people (International Crisis Group, 2005; Tibaijuka, 2005).

In Nigeria, evidence from Lagos alone indicates that over 700,000 inhabitants were known to have suffered eviction from their residences in the past two and half decades (Morka, 2012). Among the several eviction experiences in Lagos, three were most prominent: Maroko, Badia, and Makoko. The case of Maroko occurred in July 1990 when the Military Government forcibly evicted about 300,000 residents. It was estimated that 41,776 landlords were rendered homeless in Maroko's large land space of about 11,425 hectares adjacent to Ikoyi and Victoria Island areas of Lagos State. The guise employed by the government was to improve the urban space by addressing the housing problems of low-income group in Lagos (Agbola and Jinadu, 1997; Alagbe, 2010). But it turned out to be a selfish motive as government later appropriated the land for the rich without proper settlement of original inhabitants (Ige and Nekhwevha, 2014; Alagbe, 2010). In place of Maroko, what exists today is known as Oniru Housing Estate that serves the bourgeoisie. Badia, as it is known today, served as a resettlement abode for people who were forcibly evicted in 1973 from their ancestral homes in Oluwole Village, which now accommodates the massive National Arts Theatre. Most of the villagers were haphazardly resettled in Badia which later became one of the largest slum settlements in Lagos.

A joint report by Amnesty International and Social economic Rights Action (SERAC) indicates that Badia's residents suffered another eviction recently on February 23, 2013 when 266 homes for nearly 9,000 inhabitants were demolished by the State Government (Amnesty International, 2014). The situation of Makoko was not different. In April, 2005 over 3,000 residents suffered eviction as their homes were burnt by the agents of State. The shanty fishing settlement suffered a similar fate again on Monday 16th July 2012 when the Lagos State Government deployed bulldozers to demolish the houses majority of which were built on stilts after a 72-hour eviction notice (Ige and Nekhwevha, 2014).

The adverse consequences and impacts of forced eviction have been well documented. According to Macphson (2013), Slum clearance is widely unpopular today and is now rarely pursued. If anything, it further entrenches the poverty of the residents by removing their homes and destroying the frameworks they had established. In the case of Maroko, Agbola and Jinadu (1997) observed that the housing problem of the urban poor became significantly worse because most evacuees were compelled to relocate to other slum environments, thus reinforcing the cycle of slum development. According to Omirin (2003), this approach is socially destructive, with great economic cost to the community. In other words, dwellings are lost and residents are dispersed to either form new slums or exacerbate the precarious situation of existing squatter settlements. Dipont (2008) points out a similar experience in Delhi where the destruction of slums without adequate rehabilitation led to the creation of new squatter settlements or the densification of existing slums. It is further claimed that eviction and demolition of slums generally lead to destruction of housing investments or fixed capital made by the residents hence the affected households remain systematically impoverished (Ige and Nekhwevha, 2014). Oftentimes, such evictions create loss of social and safety networks, family disintegration, psychological and emotional trauma which may lead to death.

Slums in Strategic locations where land values have risen substantially are cleared to accommodate office buildings, luxury apartments, malls and infrastructure that tend to benefit wealthier households. UN-Habitat recommends that slum clearance option can only be applied if insitu upgrading is not possible and not wanted by the affected community (for example, in cases of hazardous locations). The resettlement process leads to all affected households living in adequate houses with no one being worse-off than before. Such an exercise was seen in Brazil when inhabitants were relocated from Samambaia between late 1980's and the early 1990's.

On the other hand, policies that focus on slum upgrading have been considered to have significant advantages over other types of approaches. Upgrading of slums involves physical, social, economic, organizational and environmental improvements to the present informal settlements and slums. According to Ehigiator (2013), the results of Slum upgrading include (UN-Habitats & City Alliance, 2006);

- improvement of basic infrastructure;
- removal of environmental hazards;
- improving access to health care and education; and
- improving opportunities for income earning.

2.2 Overview of Slum Upgrading Strategies

Slum upgrading in the 1980's developed from the works of John Turner (Werlin, 1999). The adoption of slum upgrading strategies marked a dramatic twist in official stance towards slums and informal settlements. Upgrading Programs are regarded as locality-based improvement strategies designed to address the various degrees of obsolescence and decay in slum areas through the production or improvement of basic services and physical infrastructure (World Bank, 2000).

In contrast to previous intervention strategies, upgrading programs occur with minimum loss of physical assets and disruption of livelihoods and social support systems. It is also claimed that slum upgrading is cheaper than other strategies. In fact, Arcila (2008) asserts that it can cost up to ten times less than clearance or relocation. Other advantages of slum upgrading over previous methods as identified by Arcila are:

- It avoids the social and economic disruption of the community; and
- Its results are highly visible within a short span of time.

Insitu slum upgrading and participatory slum upgrading are two variants of slum upgrading that are described as today's best practice. Insitu upgrading refers to improvement of existing settlements. This approach involves:

- upgrading existing dilapidated roads or foot paths;
- providing public toilets or bathrooms;
- sinking boreholes to provide water;
- building new schools and upgrading old ones;
- building health facilities;
- empowering the youths through skill acquisition; and
- building capacity.

Motivations and government responses in choosing a particular approach is generated and guided by the political context. In Brazil, for example, three cities were compared and it was found that the performance of insitu slum upgrading depends on the severity of distortions in land and credit market, and the policy initiatives to correct them (Dasgupta and Lall, 2006). The analysis identified improvement in land, infrastructure and building quality as the three most important interventions, particularly if the aim is to improve quality of life for households living in sub-standard residential units (Dasgupta and Lall, 2006). The site and services approach to slum upgrading was not particularly successful due to lack of access to housing finance. The situation can be improved if security of tenure is regularized and made less cumbersome. These findings from Brazil are applicable to other developing countries.

The concept of insitu upgrading is based on the belief that allowing residents to remain in these communities is both socially and economically more effective (Jaitman and Brakarz, 2013; Belford, 2013). According to Abdenur (2009), insitu upgrading keeps the social networks of the dwellers and the cohesiveness of the community intact while improving their living standards. Furthermore, it helps to ensure that investments already made by the families in their homes are capitalized and incentivized, leaving them in a better economic position. The concept of participatory slum upgrading is based on the argument that community participation is essential to achieve better development outcomes (Turner 1996; Hamdi, 2010). It is a cost saving strategy.

Wakely and Riley (2011) noted that participatory approach was used in Syria and Ghana. In Aleppo, Syria, the occupants of many informal settlements were able to successfully install relatively sophisticated waterborne sewerage systems with no formal technical assistance and at no capital cost to the state. The case of Cooperative Housing Foundation in Ghana which utilized community builders as a self-help strategy is another example. The concept of participatory upgrading was not popular during the 1970's and 1980's. The planners of slum upgrading projects at that time merely assumed what they believed were user's needs and demands, with little or no consultation. One of the few notable exceptions was the Lusaka Upgrading Project (Wakely and Riley, 2011).

Therefore in implementing participatory slum upgrading programs, strong local organizations should be in place, such as Churches, Mosques and Non-Governmental Organizations (NGO's). So community building is a compelling priority. The community-based groups' involvement takes the form of decision-making, implementation, monitoring, evaluation, and maintenance levels. It is important to note that every model of slum upgrading has its weaknesses and challenges. In future and for slum prevention, government may need to examine some of the challenges outlined in the next section of this paper.

3. FINDINGS AND DISCUSSION

3.1 Weaknesses and Challenges of Slum Upgrading

The literature examined in this study revealed certain weaknesses and challenges associated with slum upgrading practices. The findings are important to developing countries. They are classified into eleven categories. The sequence of the discussion of the factors is not indicative of the weight ascribed to each.

3.2 Politicization of slum upgrading program

The selection of beneficiaries for existing slum upgrading presents a myriad of challenges as policy makers seek to balance priorities, issues of political patronage and the potential for corruption. According to Jaitman and Brakarz (2013), the criteria for choosing locations for slum upgrading can be administrative, political, technical, due to strategic planning or due to other factors. The ultimate selection reflects both regional and complicated decision-making process. Ndukui (2013) contends that varied political, cultural and religious inclinations among various stakeholders in the slum are in conflict. They are a major drawback to the program, because they slow down decision making.

Another challenge is a co-ordination problem among stakeholders. This happens frequently at inter-agency level of government where different ministries are in charge of different components of the slum upgrading exercise – housing, infrastructure, physical planning, environment, etc. At community level, this manifests in the form of elite control, elite capture and corruption. Elmhirst (1999) relates slums improvement progress to political survival strategies meant to manipulate the poor among slum dwellers for selfish reasons.

3.3 Misconceptions and Negative Perceptions

The phenomenon of slums and upgrading are not generally well understood. More often than not, public interventions address the symptoms rather than the underlying causes. On a different perspective, Ndukui (2013) remarks that slum upgrading initiatives are disadvantaged by slum dwellers ignorance, lack of knowledge and skills to cope with challenges. The author recommends that effective slum upgrading should include capacity building of beneficiaries, to enhance independence, rights awareness and sustainability of local initiatives. In Kenya, a recent study revealed that lack of information, coupled with the general failure of several past slum upgrading projects to benefit the majority of the targeted slum dwellers has led to a general distrust towards the project (Amnesty International, 2009)

3.4 Planning Design and Institutional Issues

At the very heart of urban upgrading projects are needs and demands of people. These needs and demands are expected to be clearly identified, understood and prioritized. However, research into Kenyan slum upgrading programs identified several institutional and program design challenges that have hindered their successful implementation, despite strong backing from the government. For instance some projects were designed with community participations as a principal element. However the process of community participation was eventually flawed as it was found that the communities targeted by the upgrading project did not appear to have been fully engaged.

The purpose of slum upgrading is to ensure that slum dwellers have access to basic services like water, sanitation, waste collection, housing, access roads, foot paths, storm drainage, lighting, schools, health posts, etc. Ndukui (2013) however points out that in reality most slum upgrading programs are focused on housing improvements at the expense of other slum livelihoods. This is a challenge because addressing housing alone will adversely affect the outcome, which is geared towards improving the overall quality of life of slum dwellers. A more comprehensive approach is desirable.

3.5 Land and Tenure Matters

Commitment to large scale slum upgrading programs will necessarily involve policy reforms in land regulations (UN-Habitat, 2006). A major challenge in slum neighbourhood is that the land space is conscripted and may not be able to cater for all the residents after an upgrading exercise. Upgrading process almost inevitably requires the demolition of some dwellings to pave way for infrastructure runs, sites for schools and clinics, and the removal of dangerously located dwellings. Worse still is the scarcity of land for relocation where necessary.

On security of tenure, bureaucracy is regarded as one of the greatest impediments to slum dwellers. Suggestions for improving the situation have been propounded by some researchers. The World Bank (2006) recommends that security of tenure could be regularized through property mapping, titling and registration. In another perspective a study of the upgrading mechanisms of the Baan Mankong Program points out that various problems relating to security of tenure, financial support, and self-governance were initiated through active engagement of the community as actors (Boonyabancha, 2005).

A similar approach was adopted in the Tanzania-Bondeni upgrading outside Nairobi, depicted as one of the most successful of such schemes in Kenya.

Central among the factors that contributed to its success was the adoption of communal land tenure. Land was owned through a Communal Land Trust (CLT). This ensured that beneficiaries of upgrading exercise do not sell their units.

Legal challenge through court cases is another factor that adversely affects slum upgrading projects. The experience of Kenyan slum upgrading program (KENSUP) in Kibera is noteworthy. More than eighty people went to court. The court gave a perpetual injunction that the government should not begin works until the case was discharged. The plaintiffs claimed that the land in Kibera belonged to them. Hence the government had no rights to demolish the shacks. Verification of land ownership in Kibera turned out to be a problem because of multiple claimants over the same parcel of land. This scenario abounds in several parts of Africa.

3.6 Complexity of Evaluation Techniques

Initially slum upgrading was confined to the provision of physical infrastructure and service buildings. Later was added security of tenure, collective sense of ownership, and others. For reliability, upgrading of existing informal settlements should be based on an analysis of factual evidence such as geo graphic information system (GIS) and indicators of housing stress. Housing stress may be relatively easy to measure. This is not the case with social and economic indicators which are more complex to articulate and upgrade

Many current slum upgrading projects are based on the principle of combined interventions. This is usually referred to as integrated approach. These interventions usually include infrastructure works, provision of urban services, activities in education and health, and community development. This approach was adopted in the Favela-Bairro Programme in Brazil, and Programa Urbano Integral (Integral Urban Programme) in Medellin, Columbia.

A major challenge with the integral programme is the complexity of evaluation techniques. The range of expected outcomes that are directly or indirectly affected by the programme is very wide. The complementary relationship that may exist between different interventions within a programme make it very difficult to determine which of the components is more efficient at achieving the observed result.

3.7 Credibility of Participating NGOs

NGO's can be described as important stakeholders in slum upgrading initiatives. They promote the much needed activism. However experience has shown that some of them are not genuine. This category poses a challenge in slum improvement initiatives. According to Clark (1991), it is a great challenge to identify genuine NGO's due to prevailing lack of transparency and accountability. Similarly, Fisher (1998) remarks that many NGOs cannot deliver since they have been compromised by the ruling regimes. Therfore, effective slum upgrading should seek to engage NGOs that are credible, accountable, and transparent and that have unambiguous objectives.

3.8 Slum and Residents of Slum are not Homogenous

It is difficult to determine the specific purpose of slum upgrading in all contexts and according to different stakeholders. There are many diverse vested interests that exist in slums. Among them are the poor looking for a place to live, the criminal elements, and landlords who rent out shacks. The interest of these heterogeneous groups must be properly understood and brought into the planning process.

A primary challenge in slum upgrading is achieving some kind of coherence in the community in the face of differentiated interests. If not properly addressed, the situation could degenerate into social segregation and mutual distrust. UN-Habitat recommends that the best way to do this is through negotiated development which allows people to participate in negotiating their rights and understand that all the different interests will have to be addressed.

3.9 Socio-Cultural and Socio-Economic Issues

Gong and Van Soest (2002) point out that in addition to housing improvement, slum upgrade should also prioritize the socio-cultural and socio-economic issues that concern the improvement of the poor. A closely related assertion was made by Erdogen et al (1996). According to the researchers, sustenance of socio-cultural aspects should be a prerequisite for slum upgrading activities. Other authors like Leckie (1995) equally maintained that slum upgrading should integrate behavioural aspects of slum dwellers for sustainability. The case of segregation, gender discrimination of women and other marginalized groups is a challenge for slum upgrading initiative. Including women who were previously excluded from decision-making to participate in slum upgrading committees may make them feel withdrawn and intimidated to the extent that their voices may not be heard. As a result their presence may only have the impact of legitimising the output of the meeting but not fully representative of consensus and concerns of all.

The phenomenon of gentrification is another big challenge. A gentrified area is characterized by a displacement of a lower income group by a higher income one on account of change in neighbourhood character. Such displacements are associated with social dislocation and isolation.

A typical example was the former Maroko in Lagos which was demolished in 1990 after evicting the inhabitants. Out of 10,000 house owners displaced, only 2,000 were resettled. Part of the upgraded area that was formally known as Maroko is now known as Oniru Estate, where one plot of land costs over N200.0 million, and 3-Bedroom apartment is rented for more N9.0 million per annum. It is obvious that the initial inhabitants cannot afford to live in such area with rising rents and costs.

Slum upgrading is a good vision. But what happens is that the targeted dwellers do not live there themselves. Instead, they rent out to those who can afford the apartments, so that the income can assist them to educate their children and have some food. In order to stem this tide, a wholesome approach towards improving the quality of life is important in the aspect of capacity building and human development

3.10 Weak financial Mechanism

Availability and allocation of sufficient financial resources is a critical success factor in a city-wide slum upgrading process. Current upgrading activities are hampered by weak institutional and financial mechanisms as evidenced by the high dependence on external funding. The Kenyan experience reveals that such funding is donor-sourced, with little direct investment by the government. This poses a big risk because if for any reason the donor withdraws, the project will be stalled. Therefore this practice is not sustainable. In a particular case of Kisumu Town, Kenya, it was discovered that the finances were inadequate to undertake the upgrading strategy as had been envisaged.

3.11 Environmental Degradation

Slum upgrading faces the challenge of environmental degradation in the slums. Industrial effluent, uncollected garbage and flooding are among dangerous environmental exhibitions in the slums. Most of the existing slums were not planned with provision of access and services in mind. This often makes the installation of infrastructure both costly and environmentally disruptive.

Slums are also endangered due to the flammable building materials, illegal electricity connections and the use of charcoal for cooking in overcrowded homes. Therefore, effective upgrading should integrate rehabilitation and sustainability as core interventions in house improvement.

3.12 Maintenance

The current slum upgrading practices do not appear to have incorporated maintenance into the agenda. This tends to create difficulty in follow-up maintenance of upgraded infrastructure. The World Bank (2006) recommends that upgrading projects should provide incentives for community management and maintenance of upgraded slum infrastructure.

4. CONCLUSION AND RECOMMENDATION

This paper explored the literature to understand the different perspectives of slum upgrading. Insitu slum upgrading and participatory slum upgrading were found to be most favoured by practitioners. The paper further examined these slum upgrading strategies and case studies carried out by previous researchers, to compare their effectiveness and identify their weaknesses and challenges. The key findings are: politicization of slum upgrading programme; misconceptions and negative perceptions; planning, design and institutional issues; land and tenure matters; complexity of evaluation techniques; credibility of participating NGOs; slums and residents of slums are not homogeneous; socio-cultural and socio-economic issues; weak financial mechanism; environmental degradation; and maintenance.

It is recommended that policy issues on slum intervention programmes should attempt to bundle these challenges and suggested solutions to fit into their specific socio-political and environmental context.

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THE LIMIT OF LAND REGULARISATION AS POVERTY ALLEVIATION STRATEGY IN INFORMAL SETTLEMENTS: EMPIRICAL EVIDENCE FROM LAGOS, NIGERIA

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ABSTRACT

Some studies have linked land titling to economic growth and poverty alleviation through access to credit facilities, housing improvement and security against eviction. However, many other studies have equally argued otherwise. It remains an ongoing debate. This paper, contributes to the ongoing debate on the nexus between land titles and poverty alleviation in informal settlements. It demonstrates that land titling, on its own, will not necessarily leads to poverty alleviation, as the intended beneficiaries are largely not interested in the programme. In addition, empirical evidence from Lagos and some other developing regions of the world suggests that land tiling has not and may not achieve many of the benefits appropriated to it by its proponents. Where it seems to have achieved some of its benefits, it has largely not been to the advantage of the poor. This paper, therefore, concludes that the policymaker must exercise caution on the issue of land titling as a solution to the endemic poverty in informal settlements. They should also explore the option of land tenure continuum. It recommends that an effective poverty alleviation strategy must incorporate the range of assets required to build a sustainable livelihood. It must also take into considerations the complexity of vulnerabilities the urban poor encounter as they pursue their livelihoods objectives.

Keywords: Eviction, housing, informal settlement, land regularisation, poverty alleviation

1. INTRODUCTION

In the cities of most developing country, particularly sub-Saharan Africa, empirical observation shows that the map of informal settlements coincides with that of urban poverty (Arimah, 2010; Durand-Lasserve, Fernandes, Payne, & Smolka, 2002; UN-HABITAT, 2006; United Nations, 2009).

Informal settlement, though often described by different names such as squatter, slum, low-income and unplanned settlement (Srinivas, 2005; UN-HABITAT, 2003), is a spatial manifestation of certain living conditions, which do not conform to formal planning and legal rules, standards and institutional arrangements, and are often characterised by lack or limited access to one or more of the following five conditions: water, sanitation, durable housing sufficient living area and security of tenure (Palmer et al., 2009; UN-HABITAT, 2003). The situations are often dynamic, complex and vary from context to context. Poverty is a complex and multidimensional phenomenon which results from various dimensions of exclusions and deprivations.

Continuous rapid urbanisation and corresponding increase in the proportion of the urban poor living in informal settlements have brought urban poverty and informal settlements issues on the agenda of many international and national development organisations. There is a general consensus that the dual phenomena of poverty and informal settlements must be appropriately addressed, if the global agenda for sustainable development is to be realised (Barry & Ruther, 2001; UNECE, 2009). Land titling has been largely promoted as an effective strategy to economic development and poverty alleviation. Many international development organization and national governments have, over the years, considerably promoted land titling as an effective means of intervention to increasing tenure security, improving access to formal credit, encouraging economic growth and, ultimately, reduce poverty (Field, 2004; Payne, Durand-Lasserve, & Rakodi, 2007). This is based on the assumption that the residents of informal settlement are poor because they do not have formal title to the land they occupy (de Soto, 2000).

There is an ongoing debate about whether lack of formal property titles is the cause of poverty and whether provision of land titles is the only and best solution to poverty in informal settlements. Several authors, as will be subsequently discussed in the second section of this paper, have followed the line of de Soto's argument and have equally argued for land titling as the only means to achieve poverty alleviation in informal settlements. Conversely, many other authors have equally demystified de Soto's arguments. They have argued, with empirical evidence, that titling may not necessarily achieve tenure security and other range of benefits arrogated to it by its supporters. Against this background, this research aims to contribute to the ongoing debate on the link between land titles and poverty alleviation from a developing country's city – Lagos – perspective. It, however, challenges the overrated beneficiary links between land titling and poverty alleviation in informal settlements. It concludes that land titling will not necessarily achieve many of the benefits ascribed to it by its proponents or leads to poverty alleviation in informal settlements.

This paper advances its arguments based on the empirical data from a lager research project, which seeks to understand the complexity of factors which influence livelihoods of the urban poor in Lagos' informal settlements. The empirical evidence was triangulated with relevant existing literature. This paper begins with various debates relating to land titles, poverty and development in general. It then presents the research approach and Lagos in relation to the incidence of urban poverty, informal settlements and desire of government to promote land regularisation as means to poverty alleviation in informal settlements. To highlight the limits of land regularisation as poverty alleviation strategy in Lagos' informal settlements, this paper focuses on willingness to get land titles, nexus between land titles, and forced eviction, compensation, access to formal credit facilities, housing improvement and land value. The final section summarises the various arguments presented in this paper.

2. LITERATURE REVIEW

2.1 Land Titles, Poverty Alleviation and Development Debate

There are opposing views on the benefits of land titling. Some publications, including de Soto (2000) and Deininger (2004), have linked land titling to economic growth and poverty alleviation through various channels including access to credit facilities, housing improvement and security against eviction. However, many other publications (Durand-Lasserve & Selod, 2007; Easterly, 2008; Ho & Spoor, 2006; Jacoby & Bart, 2007; Migot-Adholla, Hazell, Blarel, & Place, 1991; Mooya & Cloete, 2008; Payne et al., 2007; Pinckney & Kimuyu, 1994; World Bank, 2003a) have equally argued otherwise. It remains an ongoing debate which requires more empirical studies with focus on local context (Payne, Durand-Lasserve, & Rakodi, 2009; Place, 2009).

The assumptions of the proponents of land titling, as noted by Ward (2003:4), are that, it:

- Provides security against eviction;
- Brings people into the market from which they can benefit by free sale at full price;
- Raises land values;
- Provides incentives that stimulate investment in home improvements and consolidation;
- Makes possible the introduction of basic services such as electricity and water;
- Generates greater access to credit by using the home as collateral on loans;
- Incorporates residents into the property-owning democracy and citizenry; and
- Integrates settlements and property into the tax and regulatory base of the city.

These assumptions became more prominent on the international development discourse as a result of de Soto's book – The Mystery of Capital. As noted by Payne et al. (2007) and Mooya and Cloete (2008), de Soto's ideas have provided renewed focus on the link between land titling and poverty alleviation in development policy and practice. de Soto emphasises the link between lack of land titles and poverty in developing countries. He argues that the poor lack titles to their properties, which they could use to invest in businesses and liberate themselves from poverty. Payne et al. (2007) note that de Soto's argument is based on the assumption that the provision of individual property title can bring about a 'triple transformation', where property can be transformed into collateral, collateral into credit and credit into income.

The above argument represents a conventional way of thinking about poverty. Conventionally, poverty is conceptualized as having low or inadequate income. As such, poverty is often blamed on poor economic growth. From this perspective, poverty alleviation strategies are based on economic growth. One of such strategies is market-based approach. This approach draws on economic neo-liberalism and western ideas of self-empowerment and entrepreneurship (Gifford, 2010). Lombard (2012) notes that since the 1980s market-based approaches have been promoted as a solution to development related issues, including land, housing and poverty alleviation. The market-based approaches are rooted in the ideology of making markets work for the poor, who are mostly marginalised. Hammond, Kramer, Katz, Tran, and Walker (2007) note that the market-based approach is premised on the recognition that market is central to development and poverty alleviation. Therefore, it advocates for strategies that can make markets more efficient, competitive, and inclusive, particularly for the poor. One of such strategies, as relates to informal settlements and poverty, is the land rights which focuses on land titling.

Land titling is expected to promote economic liberalization, and privatization of land allocation processes through commercial land markets (Payne and Durand-Lasserve, 2012). This approach promotes privatization of land and individual private land ownership, based on land titles, over other tenure arrangements, which are equally popular in many societies.

Land is recognized as central to development (McAuslan, 1982), while tenure is central to land (Lombard, 2012). Land titling emphasises the formality and individuality of land rights. In the Africa context, land titling involves taking land claims out of the realm of informal lineage or community land ownership and making them fully legal, formal and individual, and recording claims in a state administered land record system (Atwood, 1990). This approach has been widely adopted in many African countries (Atwood, 1990; Ensminger, 1997; Miceli, Sirmans, & Kieyah, 2001). Bromley (2005:2) observes that land titling is being promoted over other tenure arrangements based on the assumption that:

> *"…titles are also said to permit individuals to gain access to official sources of credit – banks, credit unions, lending societies – using their new title as collateral for loans to accomplish several desirable outcomes: start a business; upgrade a dwelling; or undertake investments so that agricultural production will be augmented.."*

Reflecting on above assumed benefits, though it will be apparent that many of these outcomes would potentially have the effect of reducing poverty, they reflect conventional way of thinking about poverty. It is observed that there is not enough explicit empirical evidence to support these acclaimed benefits of property titling. For example, Ho and Spoor (2006), based on the review of several studies, including Atwood (1990); Pinckney and Kimuyu (1994) and World Bank (2003b), observe that land titling has had little or no impact on development and poverty alleviation in Africa. Similar results have also been reported in Latin America and Asia countries. Payne et al. (2007), based on the review of seventeen titling programmes across Africa, Asia and Latin America, conclude that there is no adequate evidence to link titling to social and economic development, urban poverty reduction, or increasing social equity and inclusion. Corroborating this viewpoint, Payne and Durand-Lasserve (2012) assert that, in the real sense, land titling may result in the creation of a large under-class which is denied access to any form of affordable or acceptable housing.

In this regard, the market-based approach to property rights may reinforce inequality in access to land. Durand-Lasserve (2003), for instance, noted that privatization of land tenure in South Africa resulted in inequality and landlessness for the poor. Evidence from Asia, Africa and Latin America indicates that the process of land titling has led to landlessness and inequalities in land for the poor and most marginal groups (Payne & Tehrani, 2005). Durand-Lasserve (2007) also pointed out that land titling programmes carried out in the name of economic development and poverty reduction often result in increased market pressure on urban informal settlements through increase in land values.

de Soto (1989), based on his studies in Peru, had earlier argued that land's values appreciate as informal settlements become formalised. He concluded that land values in legally secure settlements were 12 times greater than in those classified unsecured. Citing studies by Lanjouw and Levy (2002) in urban Ecuador; Kim (2004) in Vietnam and Deininger and Chamorro (2004) in Nicaragua, Mooya and Cloete (2008, pp. 5-6) report that land titling increased land values by almost 24 per cent, between 3-10 per cent and 30 per cent respectively.

Durand-Lasserve and Payne (2006, p. 7) also came to a similar conclusion as they noted that formal land tenure does increase land value by at least 20 to 60 per cent. Furthermore, Payne et al. (2007) reported an increase in land values of between 25 to 73 per cent on titled land in Indonesia, the Philippines, Cambodia and Brazil. Citing Dowall (1998), Payne and Durand-Lasserve (2012) reported that in Manila the risk of eviction was considered to lower the value of housing units by 25 per cent, while residential plots in Jakarta with clear title sold for a 45 per cent premium over comparable plots without clear title.

However, widespread insecurity of tenure and forced evictions in many developing countries can also be linked to increase in land values. Werlin (1999); Payne et al. (2007); Payne and Durand-Lasserve (2012) and Lombard (2012) observe that rising land values often lead to gentrification, and land speculation by property developers, who seek to maximize profit. The outcomes have negative effects on the urban poor and low-income groups, particularly tenants who constitute the majority in many informal settlements, just like the case of Lagos where over three-quarters of the population are tenants. Palmer et al. (2009, p. 43), observe similar trends in Kenya. For example, they noted that about 80 per cent of the residents of Kibera in Nairobi are tenants, while a significant proportion of the structures are owned by absentee landlords, with some of them having multiple structures.

The effects of rising land values are transmitted to the tenants through increase in rents, which often go beyond their affordability (Dey, Sharma, & Barman, 2006), and through evictions (Payne and Durand-Lasserve, 2012). In the case of evictions, tenants often end up losing their advance rents. This situation was observed in the case of Lagos where tenants, who are forced to pay advance rent of between one and two years, lost their unspent rents and livelihood assets owing to forced evictions.

From a livelihood perspective, poverty is a complex and multidimensional phenomenon. Poverty is defined as a lack of essential resources, including economic, human, political, socio-cultural and physical, and conditions required for adequate standard of living (OECD, 2001). Poverty is beyond low income, which is the focus of land titling, but encompasses low human, social, physical, natural and financial capital (Baker & Schuler, 2004; DFID, 1999). Individuals or households may be considered poor when they have inadequate or poor livelihood outcomes. This may be a result of many factors including inadequate access to assets, vulnerability and institutions that hinder people's ability to accumulate assets (DFID, 1999; Moser, 2007). To overcome poverty, those living in poverty must pursue their livelihood objectives within a supportive institutional context that enables them to reduce their numerous vulnerabilities and accumulate assets.

From a sustainable livelihood approach, land titling, a component of physical assets, is just one of the assets required to build a sustainable livelihood while tenure insecurity is just one of the numerous vulnerabilities of those living in informal settlements. Therefore, land titling as an approach to poverty alleviation in informal settlements represents a narrow and unidimensional way of understanding poverty and way out of it. An effective poverty alleviation strategy must take into consideration the various vulnerabilities and livelihood assets of the poor. The aim of this paper is not to examine the assets and multiple vulnerabilities of the poor, but to show the limit of land titling as a poverty alleviation strategy in informal settlements. To achieve this, the paper draws on existing related literature and empirical evidence from Lagos, Nigeria.

3. RESEARCH METHODOLOGY

The materials presented in this article are based on data from a larger research project which seeks to understand the complexity of factors influencing the livelihoods of the urban poor in Lagos' informal settlements (Olajide, 2014). The study adopts the Sustainable Livelihood Framework, as a methodological and an analytical framework, to understanding poverty in informal settlements. The need to focus on livelihoods is based on the realisation that poverty is multi-dimensional. Sustainable Livelihoods Approach (SLA) provides a framework which integrates various dimensions of poverty. This framework enables a broad range of quantitative and qualitative research design and data collection methods. Specifically, in the larger research, the approach is used to examine livelihood assets of the urban poor (land title, which is the focus of this paper, is identified as one of the assets), vulnerability context within which the residents of informal settlements in Lagos pursue their livelihoods and factors which mediate assets and vulnerability.

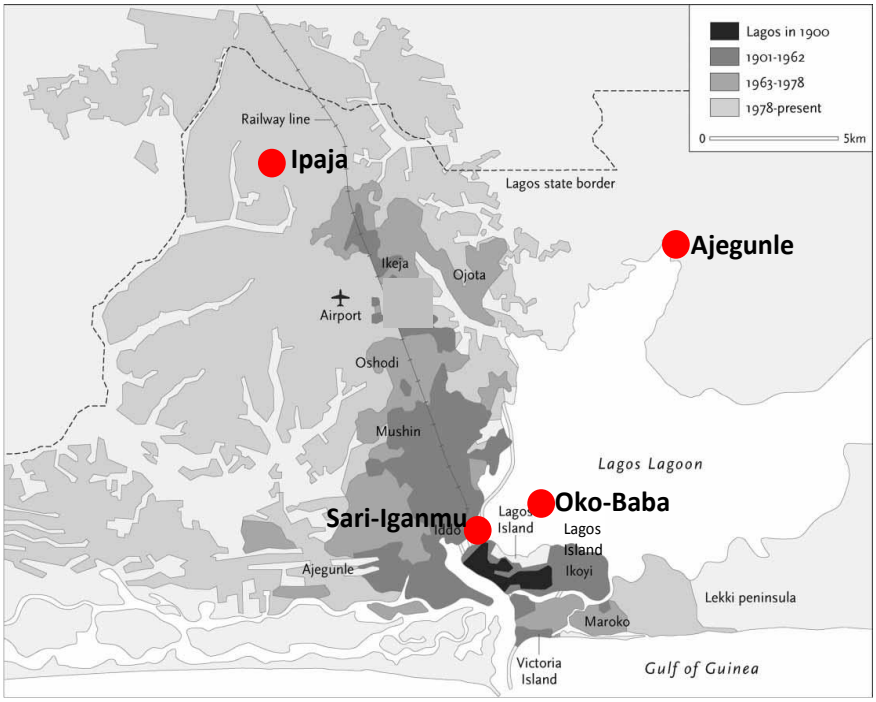

Figure 1: Spatial Location of Case Study Settlements
Source: Gandy (2006, p. 373)

The choice of Lagos, as the study context, is influenced by several factors. First, Lagos is the most heterogeneous urban area, in terms of economic, social and cultural activities, in Nigeria. Second, it is one of the fastest growing mega cities in the world with the corresponding high incidence of slum formation resulting in evictions. Spatial locations (core area and periphery) and typology of the informal settlements (slum, squatter settlements and illegal sub-divisions) were considered in settlements selection for in-depth study. This research uses multiple case studies – Ajegunle, Ipaja, Oko-Baba and Sari-Iganmu.

These cases were selected to exemplify contrasting experiences of urban poor in different locations and typology of informal settlements across Lagos metropolis. The four settlements were purposively selected, within these categories, based on information rich, easy accessibility and settlements which one can learn a great deal about issues of central importance to this research. In term of geographical location, Oko-Baba and Sari-Iganmu are located in the core (very close to the Lagos main Central Business District – Lagos Island) of Lagos metropolis, while Ajegunle and Ipaja are located in the periphery of the metropolis (figure 1). Oko-Baba and Sari-Iganmu were classified as squatter settlements, while Ipaja was classified as slum (SNC Lavalin, 1995) and Ajegunle as illegal sub-division by the Lagos State government.

A combination of quantitative and qualitative data collection tools, including household survey and interviews were used. A total of 400 household surveys and 29 interviews were conducted. The research adopts non-probability sampling because there was no reliable sampling frame, either from census figures or communities' records, to support selection of sample size based on probability sampling. In addition, the settlements are haphazardly developed which makes adoption of probability sampling techniques, such as systematic sampling and random sampling, practically inappropriate. Each settlement was divided into 100 clusters. From each cluster, one building was selected. Although the majority of the buildings are occupied by multiple households, only one household was sampled in each selected building. The actual household sampled was selected using the convenience sampling technique. Convenience sample involves participants who are readily available and easy to contact (Higginbottom, 2004, p. 15). In each building, the first household to be contacted and which showed willingness and enthusiasm to participate was sampled.

The household survey largely provided information on the assets component (human capital, physical capital, social capital and financial capital) of the Sustainable Livelihood Framework. The questionnaire was designed to obtain relevant information on the key indicators of livelihood assets. For example, as related to the data presented in this paper, analysis of human asset provided information on the socio-economic characteristics of the respondents. Physical asset provided information on home ownership, land tenure and whether or not the respondents have carried out any improvement in their dwellings. Financial asset provided information on access to credit and sources of credit, as well as if the respondents have gotten bank loan in the past, and if yes, what the money was used for. In addition it provided information on the willingness or otherwise of the respondents to use their landed properties as collateral in order to get bank loan.

Interviews, as presented in this paper, provided information on the reason why the poor are always not willing to get formal land titles and bank loan, as well as use their landed property as collateral for bank loan.

The empirical evidence was equally triangulated with the existing literature on the links between land titling, poverty alleviation and development in general. This, on the one hand, strengthens the various arguments presented in this paper. On the other hand, it allows the findings and the subsequent conclusion to be articulated within the existing body of knowledge on the subject matter. This paper does not claim to be exhaustive, particularly in its empirical evidence. The empirical evidence limits itself to legal title and the willingness of the residents of the case study settlements to get land titles, nexus between land titles, and forced eviction, compensation, access to formal credit facilities, housing improvement and land value, being the major channels by which the proponents of land titling have linked it to poverty alleviation and economic growth.

4. THE STUDY AREA - LAGOS IN CONTEXT

Lagos is geographically located on the west coast of Africa in the south-western part of Nigeria. It is the economic and commercial hub of Nigeria. It is equally one of the major economic and commercial hubs in Africa region. Lagos, one of the fastest growing cities and urban agglomerations in Africa and the seventh fastest growing in the world (Hove, 2010; UN-HABITAT, 2007) is characterized by a significant presence of the urban poor who are mostly accommodated in informal settlements. The proliferation of informal settlements is one of the most enduring spatial manifestations of poverty and urbanisation in Lagos (Morakinyo, Ogunrayewa, Koleosho, & Adenubi, 2012).

The population of Lagos and the number of informal settlements are increasing at a faster pace. In the early 1980s, 42 of such settlements were identified by UNDP (SNC-Lavalin, 1995) (Figure 2). Although, currently, there is no accurate data on the exact number of informal settlements, there are indications that large proportion of Lagos population live in informal settlements. Nubi and Omirin (2006) note that over 70% of the built-up area of the Lagos metropolis is blighted. According to World Bank (2006) and Morka (2007), over two-thirds of the population of Lagos lives in informal settlements.

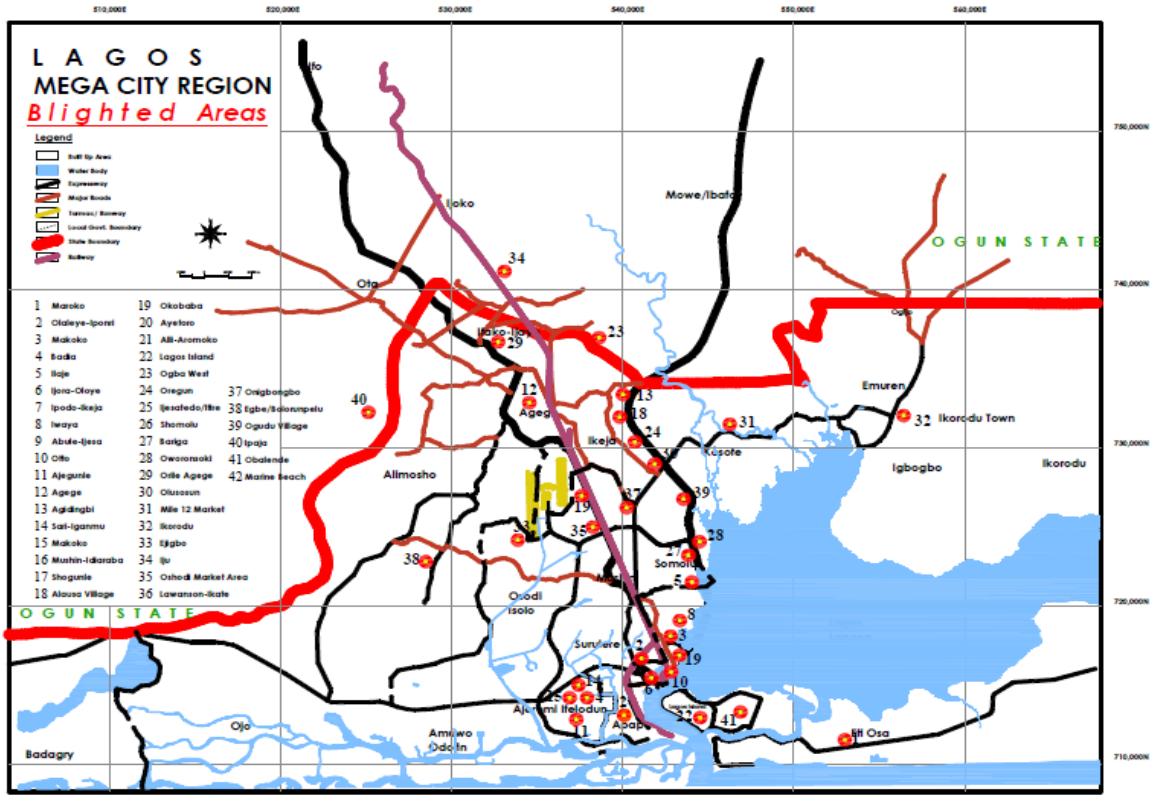

Figure 2: Locations of Documented Informal Settlements in Lagos
Source: SNC-Lavalin Report (1995) cited in Agbola and Agunbiade (2009, p. 86)

The dual phenomena of urban poverty and informal settlements are major challenges in Lagos. The state government has made efforts to address these challenges. In recent times, one of such efforts is land regularization.

t is assumed that this will encourage the use of 'dead capital' as well as attracts external investment thereby leading to economic growth. Other assumptions are that, it will: reduce transaction costs for property transfers; promote more efficient land and property markets; and help properties realize their full market value. In addition, it is assumed that it will increase government revenues [through improved taxation systems] to fund public services and facilities; and that by designing and implementing pro-poor land policies will ensure sustainable development, and help realize the Millennium Development Goals.

However, what appears to be the primary motivation of government to pursue this line of strategy is to reduce slum by bringing more land to the formal sector. This is thought to facilitate better planning which is expected to increase land value over time and subsequently increase revenue to government and the residents (Agunbiade, 2013). To a slum resident, the primary motivation for regularizing land title is security of tenure, but not necessarily poverty alleviation as being promoted by government. Residents' motivation for secured tenure are driven by, among other things, the right: to occupy, enjoy and use; restrict or exclude others; transfer, sell, purchase, grant or loan; inherit or bequeath; develop or improve; rent and sublet land.

With the prevailing land tenure laws (Land Use Act of 1978) and practice in Lagos, the expectations of slum residents and government are at cross-purposes. The realization of this by the residents, coupled with the long processes and the overall cost have tended to discourage residents' participation in land regularization policy of government. In addition, the process of land transfer, through governor's consent, is equally as tedious as securing land titles. Presently it is difficult to secure any interest or investment in land without the certificate of occupancy (the equivalent of land title in Lagos).

As a consequence of the above and as exemplified by the study of Oshodi (2010), which appraises the land regularisation policy of the Lagos State government, it has been revealed that the response rate of the intended beneficiaries has been very low. Also, Olajide (2013) observes that the policy does not take into consideration the complexity of livelihood realities and vulnerability context of the urban poor as well as factors which perpetuate poverty among the residents of informal settlements.

It is important to state that this paper is not intended to explore the complexity of livelihood realities and factors which perpetuate poverty in informal settlements. It rather focuses on contributing to the ongoing debate, from the Lagos context, on the nexuses between land titling and poverty alleviation.

5. FINDINGS AND DISCUSSION

5.1 Socio-economic Characteristics and General Description of the Case Study Settlements

The study uses four case studies – Ajegunle, Ipaja, Oko-Baba and Sari-Iganmu – within Lagos metropolis. Ajegunle and Ipaja are located sub-urban area of Lagos State while Oko-Baba and Sari-Iganmu are located in the core area of the metropolis. These locational factors have implications on the livelihood opportunities and livelihood vulnerabilities of the residents, and how government relates with the settlements in terms of urban development policies (Olajide, 2014). There are strong relationships between the case study settlements, the residents and their socio-economic situation. They are all informal settlements and predominately low income communities. The mean monthly income per household is N24,900.

The majority, however, earn between N7,500 and N17,000 which is lower than the national minimum wage of N18,000. The majority of the respondents work in the informal sector. The average household size is 6 person, with one habitable room. The vast majority of houses are in poor condition and lack access to adequate facilities.

5.2 Legal Title and Willingness to get Titles

This section discuss the tenure status of the residents, as well as tenure or legal status of the buildings and plots from both legal (formal land title) and planning (building approval) perspectives. As show in tables 1and 2 respectively, it is difficult to ascertain the actual number of plots with formal land title and the actual number of buildings with planning approval, as a majority of the respondents claim not to know. The reason can be attributed to the fact that a majority of the residents are tenants.

Table 1: Legal Title (Percentage)

Responses	Names of Settlements			
	Ipaja	Ajegunle	Oko-Oba	Sari-Iganmu
Yes	12	7	5	4
No	14	20	12	15
Don't Know	74	73	83	81

(Source: Field Survey by Authors, 2012)

Table 2: Building Plan Approval (Percentage)

Responses	Names of Settlements			
	Ipaja	Ajegunle	Oko-Oba	Sari-Iganmu
Yes	6	15	4	8
No	14	20	5	17
Don't Know	80	65	91	85

Source: Field Survey by Authors, 2012

The Lagos State government has equally joined other proponents of land titling. The state government has renewed its efforts at reducing poverty in informal settlements through land regularization by granting land titles to land owners in informal settlements. Consequently, one would expect that the supposed beneficiaries would have taken the opportunity to apply for formal titles. That is not the case. Though Table 1 does not give enough evidence to support this claim, results of the interviews indicate that a majority of the plots, if not all, do not have formal titles. This can be attributed to various factors considering the responses of some of the respondents:

> *"The land holding system in this community has made it difficult for landlord to process any form of formal land title or to even get building plan approval. Not so many people are even interested"* (key informant, Sari-Iganmu).

> *"I am a developer, if anybody claims to have certificate of occupancy (C of O) in this community, I doubt if such claim is true. The process is too cumbersome and expensive"* (interview respondent, Ajegunle).

"That (land title) is the least of my problems. There are better things to do with my money than to give government" (interview respondent, Oko-Baba).

"…is it (land title) for free? Who will pay for it?"… (Interview respondent, Ipaja).

There is a general lack of interest, from the supposed beneficiaries, to obtain formal land titles owing to the nature of land tenure system and cost. The cost is generally out of the reach of the urban poor. Payne et al. (2009) note that the willingness to acquire formal land titles will only be popular among the poor if it is free or inexpensive. The tenants generally observed that if landlords are forced to obtain land titles, it will put additional burden on them, as the cost will be borne by them through rent increase. The landlords opined that the perceived benefits are not in any way commensurate to the cost. They generally believed that it is just an avenue for government to make money from them and not necessarily to protect them from forced eviction.

5.3 Land Title, Forced Eviction and Compensation

One of the most important justifications for formal land title is that it promotes tenure security (Payne et al., 2009). Lack of formal land title has been the reason used by the Lagos State government to justify demolition and forced eviction. However, evidence suggests that there are other underlining factors, largely associated with location such as land values and settlements occupying prime locations, behind the current forced eviction of informal settlements in Lagos. Even if lack of formal titles is the only reason why government instigates demolition and forced eviction of informal settlements, this study contends that this is not necessarily a tenable justification. Forced eviction contradicts government responsibilities of ensuring adequate housing and high quality standard of living. It amounts to a violation of human rights.

This study, however, recognises that government has a right to acquire land for developmental purposes or for overriding public interest, through power of eminent domain, as recognised by the Land Use Decree of 1978. However, the same Land Use Decree equally recognises payment of compensation in the case of compulsory acquisition of land. Also, the International Declaration on Forced Eviction, which the Nigerian government is a signatory to, recognises due process and payment of compensation or, at least, alternative accommodation if eviction became inevitable. In essence, it is the responsibility of the government to ensure individual's tenure security and adequate housing. Possession of formal land title is, however, the basis of government compensation or relocation in the case of eviction. This was emphasised by several government officials of the Lagos State government after the demolition of part of Badia community in 2013:

"…the structures demolished by the government were shanties without legal titles and their value cannot be ascertained. The government can only compensate the affected residents on compassionate ground" (The Lagos State Commissioner for Housing, 2013).

"…government does not have the resources to guarantee payment to any person that puts up an un-approved building on land to which he or she is not entitled" (The Lagos State Governor, 2013).

''Two things will restrain the government from clearing or removing a building. One is prove of a right to that land and two is permit to put up structure. Except we encourage illegality'' (The Lagos State Commissioner for Physical Planning and Urban Development, 2013).

However, one of the major concerns is that it remains uncertain if government would fulfil its promise of compensation or relocation. Based on the antecedents of the state government, on similar issues in the past, it could be argued that the hope of compensation or relocation might be for a long time more a dream than a reality for many victims of forced evictions. The study of Agbola and Jinadu (1997), in the case of Maroko forced eviction, supports this argument. They noted that a majority of the residents of the then Maroko were not squatters. Some of them were actually relocated to Maroko by the Lagos Executive Development Board (LEDB), while others bought their plots from Oniru and Elegushi chieftaincy families, long before government's land acquisition. They also noted that the residents had land titles, but this did not stop government from carrying out forced eviction. Despite the overwhelming evidence that the residents were not squatters, only 2,933 out of the estimated 41,776 evicted landlords were considered for relocation (Agbola and Jinadu, 1997). Unfortunately, many of them and host of other tenants who constitute a majority did not get allocation in the government relocation sites.

The case of demolition along Orile-Badagry Expressway in 2009 further supports this argument, as aptly put by one of the key informants in Sari-Iganmu:

> *"Why will I want to apply for C of O? What exactly will I use it for? Okay, for government not to demolish my building? Government will if it chooses to and nothing will happen. Some of the houses demolished along Orile-Badagry Expressway in 2009, for the on-going road expansion, have titles, but the owners are yet to be compensated up till now."*

In this case, even though some of the properties have formal titles, nobody has been compensated (as at 2012), as noted by a key informant in Sari-Iganmu, who was affected by the demolition exercise. It was also noted that by 2013 (four years after the demolition) nobody has been compensated. The state government claimed that the names of those who are to be compensated are still being compiled. For a government that is a signatory to the International Declarations on Forced Eviction and other human rights declarations, one would have thought that, before it physically takes over the site, those that will be affected and those who deserve to be compensated should have been evaluated and adequately compensated. So, if government really wanted to compensate, this should have come before the demolition exercise. This suggests that land titles do not necessarily guarantee tenure security or adequate compensation, for the residents of informal settlements in Lagos, in the case that eviction becomes inevitable. This support the argument of Payne et al. (2009), who concluded that other forms of tenure including those in many informal settlements also provide tenure security.

They, however, noted that the ability to defend claims or, at least, negotiate relocation is based upon the strength and dynamics of social networks. This reflects the case of Oko-Baba community, one of the case study settlements. In Oko-Baba, there are two categories of stakeholders – sawmillers (they do not reside in the community but have businesses there) and residents (mostly tenants). The sawmillers were able to negotiate relocation through their association, which is known to be an influential organisation, with connection to the state government. However, the actual people who reside in the settlement (tenants) are under threat of forced eviction.

5.4 Tenure and Credit Facilities

One of the justifications for promoting land titling has been the assumption that it can be used as collateral in accessing formal credits and by extension it can lead to economic growth and poverty alleviation. Undoubtedly, land title is commonly used as collateral for obtaining loans from formal financial institutions. However, two important points to note will be: the willingness of the poor in accessing credit from formal financial institutions and their readiness to use their landed properties as collateral for bank loans. It was observed that almost all the respondents do not access credit from formal sources. They prefer to obtain credit from informal sources, such as friends and relatives, which are easy to access and do not attract interest. The challenges associated with formal sources of credit may not necessarily only be because they lack land titles. Their lack of interest in formal credit is associated with the fact that most of them do not have bank account – which is equally a prerequisite for accessing a bank loan – and they do not want to have to pay the high interest rate. More importantly, fear of debt which they considered will further complicate their already precarious conditions.

To further establish the relationship between land title and access to formal credit among the poor, this study builds an ex-ante scenario that if the respondents owned land in their respective communities or somewhere else, will they be willing to use it as collateral for loan. The result, as presented in figure 2, shows that a majority of the respondents will not use their lands, even if they have title, as collateral.

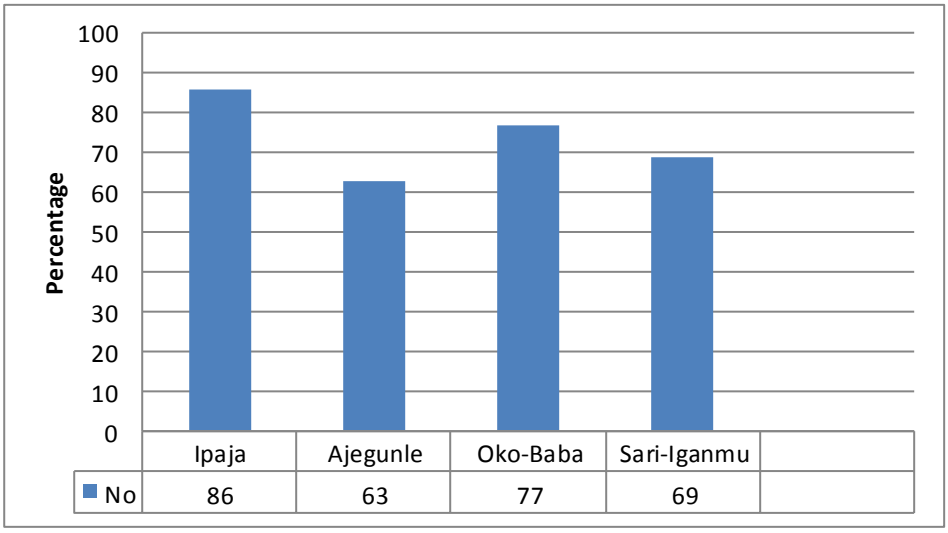

Figure 2: Non Willingness to use land as collateral

5.5 Tenure and Investment

The promoters of land titling have argued that if the poor were able to access credit from formal financial institutions, such money can be invested on business and housing improvement and, by extension, they can improve their living conditions. Contrary to this view, a majority of the respondents are not even willing to access credit from formal financial institutions for any purpose, not even for housing or business investment. As put by one of the respondents in Ajegunle:

> *"What kind of business do I want to do that will make me borrow money from bank. If I cannot raise the money through friends, relatives and my co-operative society, I will rather forget about the business. It doesn't worth it. "*

This supports the conclusion of Payne et al. (2009) that low-income households who obtain titles are usually reluctant to take a loan from a bank. In addition to the fear of debt, the reason is equally attributed to the fear of losing their properties in the event of inability to repay the loan. For a majority, a landed property is seen as an inheritance, which must be protected and handed over to the children after the demise of the parents. The idea of using properties as collateral for a loan or selling properties is generally seen as a curse and, therefore, not encouraged. However, considering the view of one of the respondents, there is an indication that a few people will use their properties as collateral to access a loan for the purpose of business investment:

> *"Why not, if the business makes sense and I am sure that it will be successful and it will bring good returns. It will be a good idea, but the problem is that it is very risky. How am I sure that the business will grow? What if the business failed, what will happen to the property? Bank will take over the property, right? That is the challenge".*

This respondent raises more fundamental questions than answers. The challenge here is that it is difficult to predict success or profitability of a business, particularly in Nigeria where there are no adequate infrastructure to support business operations. Also, the Nigerian business environment is volatile and hostile, particularly to small and medium scale enterprises and informal sector. Agboli and Ukaegbu (2006), describe Nigeria's business environment, in terms of infrastructure, access to credit, bureaucratic practices and regulatory policy, as unfriendly and obstacles for business to thrive. Though starting up a business from the scratch is challenging anywhere, it is more challenging in Nigeria than a lot of other countries (World Bank & International Finance Corporation, 2013). Inadequate infrastructure, particularly electricity, has forced many people out of business.

On the issue of credit and home improvement, it was found that a majority of the respondents are not willing to access credit from formal financial institutions for housing investment. Though not so many landlords have carried our improvement on their buildings and not so many tenants have carried out improvement on their dwelling units, a few people who have carried out any form of improvement have done so largely from personal savings, and gifts from friends, relatives and children. There is no evidence that any of the respondents have used a bank loan for housing investment, including renovations, extensions and new constructions. Boleat (2005) observes that less than five per cent of housing development in developing countries is financed by formal financial institutions.

Even though the majority of the poor are often not willing to take credit facility from the formal financial institutions, their conditions and the worth of their properties (those who are willing) also put them at a disadvantage of being profitable borrowers to the lenders, in this case formal financial institutions. As noted by NUCHS (2002), formal financial institutions do not provide credits to members of the low income groups and poor communities. There is a general belief that poor people do not have the capacity to repay, as a result of their irregular flow of income and lack of credit history.

In addition, the worth and the locations of their properties often discourage financial institutions to grant them a loan.

6. CONCLUSION

This paper has contributed to the ongoing debate on the nexus between land titling and poverty alleviation. Land titling is generally considered to be an effective poverty alleviating strategy in informal settlements. This is expected to occur through various channels including access to credit facilities, housing improvement, increase in land values and security against eviction. This is based on the assumption that informal settlement dwellers are poor because they do not have formal titles to the land they occupy. The Lagos State government has also embraced this strategy.

Empirical evidence, from Lagos informal settlements, however, shows that the residents are generally not interested in formal land titles because the perceived benefits are not in any way commensurate to the cost. Also, the cost is out of reach of the supposed beneficiaries. Land title is said to promote tenure security and compensation. Contrary to this assumption, evidence suggests that land title does not necessarily guarantee tenure security or compensation in the face of forced eviction. Contrary to the assumption that land titles can be used as collateral in accessing formal credits, it was observed that a majority of the residents of the case study settlements are not willing to access credit from formal financial institutions and are not ready to use their landed properties as collateral. The main reasons attributed to this are fear of debt and fear of losing their properties in the event of inability to repay the loan. Also, formal financial institutions belief that people living in poverty have low capabilities to repay. Therefore, they are often not willing to give the poor a loan. One of the common agreements of the proponents and critics of land titling is that it increases land value. Evidence, as discussed in section 2, however, shows that such increase does not often benefit the poor. Rather, it worsens their conditions through gentrification, market forces, forced evictions and increase in house rent.

The point to be emphasised here is that why it might be necessary to advocate for land regularization, it is evident that it is not sufficient to alleviate poverty or guarantee tenure security. To a curious mind, therefore, it could be asked, what is the benefit of promoting a policy which exacerbates an already precarious condition? The various empirical and theoretical arguments presented in this paper, on the one hand, call for a rethink of the promotion of land regularization through land titling as a solution to poverty and tenure insecurity in informal settlements. On the other hand, they suggest that caution must be exercised on the issue of land titling as a solution to the endemic poverty in informal settlements. Consistent with the views of literature, alternative to formal land titling will be community land trusts as it is being practised in a number of communities in Kenya; the certificate of rights in Botswana; communal land rental in Thailand; the adaptations of customary tenure in parts of sub-Saharan Africa (especially in Mozambique and Ghana); the concession of the real right to use land in Brazil's favelas; and the certificate of comfort available to squatters on public land in Trinidad, which protects large numbers of squatters from eviction. These are also consistent with the strategies of World Bank that advocated land tenure continuum. This is a good theme to pick up in any further study.

On the issue of poverty alleviation, an effective strategy will need to take into consideration the range of assets required to build a sustainable livelihood, and the complexity of vulnerabilities and institutional constraints which the urban poor encounter as they pursue their livelihoods objectives.

The authors acknowledge that this is beyond the scope of this paper and, therefore, recommend further study to focus on this. This will be the starting point for developing an effective approach to address the issue of poverty in informal settlements.

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SOCIOECONOMIC DYNAMICS AND ENVIRONMENTAL HEALTH OUTCOMES IN INFORMAL SETTLEMENTS OF PORT HARCOURT, NIGERIA

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ABSTRACT

Although many studies have shown strong evidence of a direct relationship between the human environment and health, they have been too generic in nature, concentrating on community patterns and largely ignore the link between environmental health outcomes and specific socioeconomic indices manifesting at the household level. This study, therefore, seeks to understand the interface between household socioeconomic indices and the urban environment in six informal coastal settlements of Port Harcourt Nigeria. It further examined how these interactions affect environmental health. It questions the extant belief that living in a deprived neighbourhood is bad for one's health, hence the focus on the households level. Issues examined include housing and environmental conditions like sources of water, sanitation methods, drainage conditions and quality of toilet and kitchen facilities as well as socio-economic characteristics such as age, gender, income and household size. Health seeking behaviour and recent self-reported illnesses associated with poor environmental conditions were also considered. Data collection was by mixed methods integrating simple random sampling on household heads as well as focus group discussion with community leaders in Andoni, Bundu, Captain Amangala, Emenike, Marine Base and Rex Lawson communities respectively. Data analysis was by simple descriptive statistics as well as chi square test of relationships.

Major results show that even though environmental and housing conditions across the selected communities were in deplorable conditions, socio-economic status, especially educational level of the household head, had a significant influence on health seeking behaviour. Furthermore, sanitation related diseases (diarrhoea, typhoid and cholera) were the most prevalent, directly attributable to the poor environmental conditions. The study concludes by advocating for community driven urban renewal efforts aimed at improving access to urban basic services including education and health infrastructure. It further advocates for an interface of the formal-informal governance structures in order to find a mutually beneficial solution to the hitherto almost neglected people of the informal squatter waterfront settlements of Port Harcourt waterside communities.

Keywords Environmental health, informal settlements, prevalent diseases, Port Harcourt, socio-economic

1. INTRODUCTION

Urban agglomeration in Africa is typified by the urbanization of poverty. The African Union (2003) has described this process as resulting in a situation where majority of urban dwellers grapple with widespread unemployment, food insecurities and life under squalid conditions. The 2010 State of African Cities Report estimates that 62% of urban dwellers reside in slums, hence Pieterse (2011), concludes that based on current trends, urban poverty, ill-health and slum urbanism will continue to feature significantly in African city life for at least the next four decades.

Informal settlements (slums and squatter settlements) are the most tangible evidence of pervasive urban poverty, and in Nigerian cities; they range from clusters of shacks in environmentally fragile land areas to entire local government areas. As described by Scalar and Northridge (2003), while their physical forms vary by place and over time, slums are uniformly characterized by inadequate provision of basic infrastructure and public services necessary to sustain health, such as water, sanitation, and drainage. Port Harcourt is the largest and most significant urban centre in the Nigeria's Niger Delta with a population that has grown from 135,000 in 1960 to 1.4 7million in 2010 and projected to reach 2.6 million in 2025 (UN-Habitat, 2012). Recognized for its beauty and cleanliness (Archibong, 2004), the erstwhile beautiful Garden City has now been taken over by as many as 49 recognized informal settlements (Akujuru, 2008) accounting for 65% of the city's population (Odoemene, 2011). Most of these settlements are located along the many water bodies that traverse the city (Obinna et al, 2010).

Studies on socio-economic differentials and health status in developing countries are many and include the work of Rutstein, 1984; Bicego and Boerma, 1993; Gwatkin et al, 2000 and Woelk and Chikuse, 2000. More recently, studies such as those of Feng & Myles (2004) and Arleen et al (2007) posit that residence in a socio economically deprived neighbourhood have been linked to poorer health outcomes, while others such as Stafford et al. (2003) as well as Wen et al (2003) and Ballesteros (2010) opined that the relationship between neighbourhood status and health cannot be taken to mean that living in a deprived neighbourhood is bad for one's health. According to the Institute of Medicine (2009), health disparities are produced by both environmental factors (i.e. physical, chemical and biological agents to which individuals are exposed) and social forces (i.e. individual and community level characteristics such as socio-economic status, education, psychosocial stress, coping resources and support systems).

Individual and household socio economic status are specifically linked to health outcomes as higher income is associated with more frequent and more intensive use of health services (Castro-Leal et al, 1999), while the human assets of knowledge, literacy, and education also influence household decisions with regard to the proximate determinants of health(World Bank, 2001). In low income communities such as those in Port Harcourt, household statuses are important indicators. This is because socioeconomic dynamics oftentimes determine the vulnerabilities of particular households to environmental health conditions. Although the health of a population is determined by a large number of factors, placing emphasis on individual and household level determinants, such as age, education, marital status, behaviours, health competencies, and SES, is important (Bonita et al. 2006; Ruiz et al , 2011).

Studies on socio-economic status and health in urban settlements in Nigeria include those of Adedoyin and Watt (1989) who investigated urban health conditions in Ilorin slums, Egunjobi and Olatubara (2002) who studied environmental health conditions in traditional communities in Ibadan, Agbola, Nwokoro and Kassim (2007) who analysed housing conditions and health status of urban slums in Ibadan. These studies have all shown strong evidence of a direct relationship between the human environment and health. They however are generic in nature, concentrating on community patterns and largely ignore the link between environmental health outcomes and specific socioeconomic indices manifesting at the household level.

The study therefore seeks to understand how household socioeconomic indices interface with the environment and the consequences of these for health outcomes in six low income settlements of Port Harcourt Nigeria. In the light of all the above, this paper therefore seeks to answer the following questions; what are the socio economic characteristics of the residents of the study area, what are the environmental health conditions in these areas, Is there a land governance framework in the study area and what is the relationships between selected squatter settlements and identified health indicators of the residents in the study area. The study leans on the hypothesis that even though the communities share similar environmental conditions, household level socioeconomic status have a great influence on environmental health outcomes. It outlines the methodology which combines both qualitative and quantitative methods of enquiry including direct observations, empirical survey. It thereafter analyses the data with the use of chi square tests of relationships and concludes by making recommendations for the major issues highlighted.

2. THE CONTEXT OF THE STUDY

Port Harcourt, the capital of Rivers state is the predominant coastal city in Nigeria's south south region. This study is based on the squatter settlements located mainly by the waterside areas in old Port Harcourt. The old Port Harcourt city centre remains the same attractive commercial, trading and administrative centre of the expanding metropolis. According to Theis et al (2009), it is a high level peninsular jutting out into the mangrove swamps along the Bonny River and fringed with low–lying areas by the waterside which have been reclaimed both formally and informally over the years. The communities that live along the coastal areas of Port Harcourt are interchangeably called "waterfront" or "waterside", but while waterfront is a global name for areas of natural beauty, commercial potential and desirability with high value real estate with great investment potential, waterside on the other hand is a term which captures the occupants' marginal character and peripheral location literally and socio-economically. For example, Bundu waterside, Okrika waterside, Marine base etc.

Most of the waterside areas have developed informally and currently occupied by established communities living, in many cases, at very high densities (Theis et al, 2009). A major contributing factor to the growth of these communities is their closeness to the city centre and formal commercial riverside developments and the employment and social service opportunities available there. This unacceptable high densities, their haphazard manner of development and lack of adequate sanitation make them prone to environmental and health hazards. On the basis of water and sanitation alone, and most likely according to the other criteria, the Port Harcourt Waterfront settlement inhabitants are clearly defined as slum dwellers by the UN definition. In terms of topography, these areas are subject to flooding and will increasingly be so with rising sea levels associated with climate change predictions. These communities can then be summarised as having the following characteristics which justify their choice for this study. They surround the city centre peninsular and are located along low-lying reclaimed land, with buildings sitting at water level or less than 4 metres above it. Their major sources of income are fishing and informal income generating opportunities. There exists a high degree of social cohesion, with many communities which allows for close and long-standing kinship ties and heritage. There was community participation in the areas of land reclamation by sand-filling, creating access, sinking boreholes, providing electricity and other basic services. The settlements are characterised by a lack of basic and social infrastructure as well as absence of vehicular access in many parts of the waterside areas. This is a big challenge in the provision of basic urban services such as access to emergency service vehicles and for solid waste removal and disposal.

According to Aprioku (2005), the question of land ownership is controversial as the Rivers state government claims ownership of the Waterfront areas as haven been set aside for the development of the metropolis under the Land Use Decree of 1978. However, the residents have a contrary opinion, with many of their families have resided in these communities over several generations. With the government attempting to implement the Greater Port Harcourt City Master plan which allocated higher end commercial and tourism land use to the area, persistent conflicts between the residents of these waterside communities and the government over this issue has resulted in attempted evictions and violent confrontations.

The research therefore attempts to unravel the effects of tenure status on the environmental conditions and health status of residents in squatter settlements in Port Harcourt as well as determine the influence of land policy and land titling on health and socio-economic activities in solving the underlying problems of urban centers. This is expected to increase knowledge in the fields of city redevelopment and urban planning.

3. RESEARCH METHODOLOGY

The study is essentially an empirical study that required the collection of data on socio-economic characteristics, environmental conditions and the effect of these on the health seeking behaviour and status of the residents of the study area.

Six (6) coastal communities were randomly selected from the 49 identified squatter settlements in the Port Harcourt Metropolis. They are Andoni, Bundu,Captain Amangala, Emenike, Marine Base and Rex Lawson. The sample frame and size were determined based on the average household size of 6.0 in Port Harcourt. A total of 833 questionnaires were administered: Andoni (117), Bundu (235), Captain Amangala (94), Emenike (35), Marine Base (176) and Rex Lawson(176).

The research exercise was ethically carried out as prior approval of the research instrument was sought from the Research and Ethics Committee of the Lagos University Teaching Hospital. Furthermore, respondents participated of their own volition and signed an Informed consent form before the interviews.

Primary data was obtained through questionnaire distribution, direct interviews, focus group discussions and personal observations. Questionnaire was administered on household heads selected through the use of simple random sampling. Variables considered include socio economic variables such as age and educational qualification, environmental conditions such as water and sanitation as well as health seeking behaviour such as accessibility to health facilities and disease profile. Secondary data include medical records of inhabitants sourced from various hospitals to determine the most prevalent diseases. The diseases considered include respiratory, water related, sanitation and malaria. Focus Group Discussions (FGD) were also organized in order to corroborate information from the survey exercise. FGD was mainly to get information on the inter-community interactions, land governance issues and how they were responding to identified sanitation ailments which were identified from the survey results. These issues were ignored by most respondents hence they were made the major issues for discussion at the FGDs.

Relevant maps were generated to locate important flashpoints with the help of GPS. Data analysis was through descriptive as well as chi square tests of relationships to determine associations among socio economic conditions, environmental and housing conditions and the health status of inhabitants in the selected squatter settlements, and to identify major relationships between socio-economic status and health outcomes at the household level.

4. FINDINGS AND DISCUSSIONS

Presentation of research findings covered the major issues examined as well as across the six communities selected for study. These include the household dynamics regarding socio economic conditions, environmental and housing conditions and the health profile of the inhabitants. Furthermore, the results of the chi square tests were used to determine the relationships among these variables

4.1 Socio Economic Conditions of Residents in selected Communities

The six selected communities fall within the areas designated as “waterfront” or “waterside”, otherwise known as squatter or informal settlements. The socio economic variables that were investigated were age, gender, educational qualification, average monthly income, employment status, and housing tenure ship status of household head.

The study revealed a predominantly male population across the communities as shown in Table 1. While 56.3% of the respondents were males, 43.7% were females, with Bundu having the highest proportion of both males and females while Emenike had the least. However, most of the females were said to have gone to their various businesses mostly fishing and trading. Research findings show that most of the population in these communities are made up of mostly people in their highest productive and procreative ages. 43.0% are between 31 and 45 years mostly based in Bundu, while 27.3% of the inhabitants are within the 16 – 30 age range. Collectively these groups make up over 70% of the respondents. The age range of 46 – 60 represents 23% of the entire population, while the elderly aged 61 years and above is made up of only 3.3% of the total number of respondents.

Table 1 further indicates the relative high literacy level in the study area as majority of the respondents' have at least secondary school education (60.4%). These are mainly resident in Bundu, Rex Lawson and Marine base communities. Respondents that have attained tertiary education are made up of 20.1% of the total number, which is almost evenly spread across all the communities. Only 9.9% of the respondents attained primary level, while those that did not have any formal education are represented by 9%.

Table 1: Socio-economic Conditions of Residents compared across Communities, Port Harcourt, 2013

		Study Location						
Characteristics		Emenike	Bundu	Marine Base	Captain Amangala	Rex Lawanson	Andoni	
		%	%	%	%	%	%	%
Gender	Male	2.8	14.8	12.9	5.4	11.5	8.9	56.3
	Female	1.8	11.2	9.3	6.5	9.7	5.1	43.7
Age in Years	16-30	0.7	7.2	7.8	2.5	6.1	2.9	27.3
	31-45	2.7	11.8	8.0	5.7	8.6	6.3	43.0
	46-60	1.2	6.6	5.5	3.1	5.9	4.1	26.3
	61 +	0.0	0.9	0.3	0.5	0.5	1.1	3.3
Level of Education	None	0.1	2.5	1.6	1.1	2.7	1.6	9.6
	Primary	0.0	2.7	2.7	0.8	1.1	2.7	9.9
	Secondary	3.3	16.7	12.8	6.0	13.1	8.5	60.4
	Tertiary	1.1	4.4	4.7	3.9	4.3	1.9	20.1
Occupation of Head of Household	Public/Civil Servant	0.8	4.0	3.2	2.4	4.1	0.7	15.0
	Private Employed	1.2	4.1	2.2	1.6	2.1	1.3	12.5
	Business	2.2	14.0	11.1	6.2	8.6	8.2	50.3
	Informal Economy	0.3	1.1	1.5	0.5	1.8	1.3	6.5
	Unemployed/Retired	0.0	2.1	1.6	0.9	2.8	0.8	8.2
	Other	0.0	1.3	1.7	0.1	1.8	2.5	7.5
Average monthly Income monthly in income	N18,000 and below	2.0	8.0	6.7	3.7	5.4	3.7	29.5
	N18,001- N25,000	1.3	5.9	3.9	3.0	4.7	5.0	23.8
	N25,001- N40,000	0.8	3.2	3.0	2.2	4.0	1.2	14.4
	N40,001- N60,000	0.7	4.4	3.5	2.7	5.4	1.0	17.6
	N60,001 & above	0.2	2.3	2.2	1.0	0.5	1.7	7.9
	No idea	0.2	2.0	1.8	0.3	0.7	1.8	6.9
No of Rooms for Exclusive Household Use	1	2.0	14.5	12.2	4.2	9.9	6.6	49.3
	2	1.5	8.5	6.3	3.2	8.7	6.6	34.8
	3-4	0.6	3.1	2.4	4.2	1.5	2.4	14.1
	5 &above	0.4	1.0	0.1	0.1	0.1	0.0	1.8

Most of the respondents (65%) are self- employed, operating mostly in the informal economic sector as artisans or traders. Only 15% are employed by the government civil service which is not surprising based on the minimum educational requirement for this type of employment. 6.5% represents those involved in the informal activities while 8% are retired which also corresponds with the low % of elderly population.

In analysing the monthly income of respondents, the basic minimum wage of N18,000 (about $120) in Nigeria was adopted as the threshold level for absolute poverty. Residents that earn less than the monthly minimum wage make up 29.5% of the respondents and are considered as in the absolute poor category. This is significant as almost a third of respondents fall within this socio-economic cadre. On the other hand, 23.8% and 32.0% earn between N18,000 – 25, 000 ($120-180) and N25,001 – 60,000 ($180-400) respectively. Only 7.9% of the total number of respondents earn over N60000($400) monthly. These different earning capacities are spread almost evenly across the communities investigated and corroborate both their level of educational attainment and employment status. The study will later attempt to understand how household incomes affect health outcomes. From the fore-going, it can be concluded that these six communities have very similar and striking measures of low socio economic status. However, average household income was varied as 29% fell under the absolute poor category and 8% could be considered as earning average income of over N50,000.

Average household size in the study area was between four and six and information on the number of rooms occupied by each respondents' household, yet another measure of socio economic status was obtained. Across the six communities, about 50% of residents' households share one room, 34.8%, share two rooms while only 15.9% can afford to live in more than two rooms. This corroborates the submission of Theis et al (2009) that an average household size in the slums to be about 5.3 persons per household. With limited evidence, an assumption of an average room occupancy rate of about one room per household, was also allowed. The extent of individual household over-crowding is an important factor which exacerbates public health issues, especially in a scenario which manifested in all the communities where when developments were built to a high density with narrow access ways and little air-spaces between houses.

4.2 Environmental and Housing Conditions of Residents in selected Communities

The environmental factors that were investigated include types of building, drainage facilities, sources of water, waste disposal methods, toilet facilities and kitchen facilities. These are all indicated in table 2 and discussed forthwith.

The major type of building occupied by the respondents is the rooming apartment popularly known in local parlance as "face –me- I -face -you", referring to many rooms facing each other along a usually very long and dingy corridor. Results show that 47.6% of the respondents live in rooming houses, 25.4% in one room apartments and 24.3% in flats. It had been reported earlier that about 50% of the respondents share single rooms with other members of their households. The implication is that the communities are prone to environmental vulnerabilities associated with overcrowding as several households reside in rooming houses, the predominant building type in the study area. This precarious condition is further enhanced as there are no recreational or incidental open spaces in the communities. Direct observation shows that majority of the respondents use their surrounding open spaces for commercial activities such as snail processing.

The field survey, focus group discussion also corroborate the literature on Port Harcourt environmental fragility such as that of Aprioku (2005) which highlighted poor drainage across the city and the flood-prone nature of the waterside communities.. These waterside communities are especially vulnerable because of their location on the mud flats in addition to facing multiple threats from local, riverine and storm surge flooding which are all likely to increase over time due to current threats from global environmental change. Poor drainage was evident across the study area with 45.5% of respondents having no drainage facilities at all. Although 39.2% have drainage facilities, they were not free flowing as many were full of debris and household wastes.. Only 15.3% of the respondents' environment have good and free flowing drainages. The implication of this is the possible breeding of mosquitoes and other rodents, causative agents for malaria and sanitation illnesses.

As noted by Aprioku in 2005, around 80% of solid waste is dumped into rivers, and /or used as a base for further land reclamation. This was evident in the study area and across the study area, 53.5% considered this a sustainable means of disposing household refuse. The efficiency of this communal dumping is very much in doubt as most of the communities were observed to be experiencing environmental deterioration as different types of refuse were seen scattered all over the place. Refuse burning or burying was practiced by about 26.1% of the respondents, while 17.2% patronise scavengers or cart pushers.

Access to safe sources of water was poor in the communities, typical of many Nigerian cities. Generally water for drinking was from the purchase of sachet water, drawn from questionable sources, while water for bathing and cooking was from the surface wells or boreholes, which were usually donated by community leaders and faith based organizations. However, most of the 49.4% of all respondents who sourced water from boreholes did so by purchasing by the bucketful from the commercial ventures, While 39.0% patronised itinerant water vendors or tankers. Only 8.7% of the respondents have access to public piped borne which was reported to be dry most times.

Toilet facility is one important measure of neighbourhood environmental condition. In the communities investigated it is not surprising that majority of the respondents defecate by the waterside. This is because most of the houses are makeshift stilt houses built on land reclaimed by dumping of refuse and so not very suitable for water closets. Many entrepreneurs in Bundu and Captain Amangala ran commercial toilet facilities that drained directly into the creeks. However, Emenike had a reasonable number of water closet toilets and this may be due to her location at a higher gradient. Pit latrine is another prominent method of toilet facility used by the respondents.

Table 2: Environmental /Housing Conditions of Residents compared across Communities, Port Harcourt, 2013

Characteristics		Emenike	Bundu	Marine Base	Captain Amangala	Rex Lawanson	Andoni	Total
		%	%	%	%	%	%	%
Type of Building	Traditional Compound	0.1	0.9	0.4	0.1	0.4	0.3	2.3
	Rooming House	2.7	13.2	10.4	4.2	9.1	8.0	47.6
	Single R/m Apartment	0.4	5.8	5.3	3.5	7.2	3.2	25.4

	Flat	1.1	6.6	5.0	3.9	4.5	3.2	24.3
	Duplex	0.0	0.0	0.1	0.1	0.1	0.0	0.4
Condition of Drainage	Free	2.6	3.3	2.3	3.3	0.7	3.0	15.3
	Blocked	0.7	4.1	4.8	.9	7.4	3.5	21.3
	Open & Blocked	0.6	2.9	2.7	2.9	6.1	2.7	17.9
	No Drainage	0.6	14.6	10.0	5.2	8.5	6.5	45.4
Garbage Disposal	PSP/Municipal Collection	0.8	0.5	0.0	1.6	0.0	0.3	3.2
	Private Scavenger/Cart Pusher	3.5	2.2	2.4	5.1	2.4	1.6	17.2
	Communal Dump	2.2	17.7	14.8	5.1	7.0	6.7	53.5
	Burning/Burying	1.6	7.3	5.1	2.2	4.8	5.1	26.1
Source of Water	Public Pipe borne water	0.0	1.4	1.7	1.8	1.8	1.8	8.7
	Borehole	3.5	10.9	8.2	7.1	11.3	8.2	49.4
	Surface Well	0.3	1.1	0.1	0.0	0.0	0.0	1.6
	Water Vendor/Tanker	0.7	11.5	10.1	3.5	8.2	5.0	39.0
	Stream/Pond	0.0	0.3	0.3	0.0	0.0	0.3	0.9
Type of Toilet Facilities	Water Closet	50.0	29.7	29.9	39.3	-	-	-
	Pit Latrine	20.6	9.9	12.1	10.1	-	-	-
	Bucket Latrine	-	3.5		1.1	-	-	-
	By the waterside	26.5	43.6	42.0	47.2	-	-	-
Respondent Kitchen	Indoors (Designated Kitchen	1.2	7.5	7.1	4.6	6.1	5.0	31.5
	(Within living quarters)	0.1	2.1	1.8	1.3	2.7	1.6	9.6
	(Along corridor)	1.9	11.1	7.7	3.8	7.7	4.4	36.7
	Outdoors (Designated Kitchen	1.3	1.9	2.1	1.5	3.6	2.8	13.2
	(Open Air)	0.3	3.0	1.0	0.9	1.9	1.9	9.0

Expectedly, the kitchen facilities in communities dominated by rooming apartments will be poor and shared. Research findings revealed that 36.7% of the residents interviewed did their cooking indoors, along the corridors of the rooming houses. Accordingly, each resident has its cooking area, beside the door of his own room along the corridor. This portends a lot of fire risks as well as air pollution, hence the study will attempt to understand if there is a relationship between number of rooms per household and prevalence of respiratory illnesses. While 31.5% have indoor designated kitchens, 13.2% have outdoors designated kitchen spaces. This also agrees with the finding of the proportion of residents living in one room apartments. However, 9.0% of the population still cook outdoor in the open air while only 9.6% have kitchens properly located within their flats. It was also discovered that most of the respondents used kerosene stoves for cooking,

while others used charcoal and firewood. Only a marginal few used gas and electricity as sources of energy for cooking. Furthermore, many of the residents powered their electrical appliances from the national grid, though the power supply was not dissimilar to that experienced in the rest of the Metropolis.

From the indices analysed above, it is safe to conclude that the environmental and housing conditions across the selected communities are in very poor condition which is also a reflection of their low socio economic status.

4.3 Health Seeking Behaviour and Disease Profile of the Residents

The aim of the study is to ascertain if the identified socio economic and environmental conditions have any effect on the health of the inhabitants. It is therefore instructive to find out how the residents care for their health and wellbeing and the most prevalent diseases that are associated with these poor conditions.

In terms of patronage of medical facilities, almost half of the respondents visit the patent medical stores or chemists which represents 46.9% of the population as seen in Table 3.The study revealed that among the respondents, 30.4% and 22.6% visit the hospitals and indulge in self-medication respectively. This could be linked to the poor accessibility to primary health care across the communities. Only 14.0% have the primary health care centres located within a walking distance. While 15.2% of the residents have these health facilities located within 1 -2 km, about 22.5% need to travel for over 2km before they can reach the nearest formal health facility. The implication is that in emergency cases, respondents are likely to go to the nearest chemist store for medical care

Table 3: Health Seeking Behaviour and Disease Profile of Residents across Communities, Port Harcourt, 2013

	Characteristics	Emenike	Bundu	Marine Base	Captain Amangala	Rex Lawson	Andoni	Total
		%	%	%	%	%	%	%
Medical Service Use	Hospital	2.8	7.4	6.6	4.4	6.1	3.1	30.4
	Patent Medical Store	1.5	12.6	10.5	4.2	10.8	7.3	46.9
	Self-Medication	0.3	6.7	2.9	3.1	4.4	5.3	22.6
	Herbalist/Spiritual houses	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Access To Basic Primary Health Centr	Walking Distance	0.8	3.0	2.2	4.0	2.0	2.0	14.0
	1/2 to 1km	1.2	4.8	4.5	2.8	1.0	0.0	15.2
	2-4km	0.2	1.0	0.7	1.7	5.7	1.8	11.0
	More than 4km	0.3	2.3	0.7	1.2	5.0	2.0	11.5
	Above N10,000	0.0	0.7	0.0	0.0	0.0	0.0	0.7
Health Insurance Beneficiary	Yes	0.1	3.0	0.8	0.8	0.7	0.7	6.0
	No	3.8	21.2	17.0	10.1	17.8	13.1	83.0
Respiratory Disease	Cough & Catarrh	5.5	27.6	16.4	12.9	21.9	15.7	100.0
	Asthma	9.7	29.0	22.6	19.4	6.5	12.9	100.0
Sanitary	Diarrhoea	15.4	34.6	7.7	3.8	11.5	26.9	100.0

Diseases	Typhoid	7.8	30.5	19.8	9.0	19.8	13.2	100.0
	Cholera		45.5	45.5	9.1	-	-	100.0
Others	Malaria	5.1	30.3	18.1	12.6	19.0	15.0	100.0
	Fever and Headache	5.6	27.3	18.2%	12.4	21.3	15.2	100.0
	Heat Rashes and Skin Prob.	11.9	28.6	16.7	9.5	9.5	23.8	100.0
	Burn	13.3	26.7	26.7	13.3	20.0	-	100.0
	Worm	5.9	21.6	24.5	8.8	29.4	9.8	100.0
	Ulcer	6.9	20.7	17.2	12.1	25.9	17.2	100.0

The focus group discussions revealed that some people take advantage of this vulnerability. The case of Marine Base where periodic sessions with itinerant alternative medical practitioners charging consultation fees, diagnosing a myriad of illnesses and selling medicine occurred at the Town Hall is an example. Health insurance is quite novel in Nigeria, hence awareness and importance of this is yet to be understood by most people, so expectedly only 6% are either aware or have registered with the National Health Insurance System (NHIS). These are likely to be the civil servants among the populace.

The disease profile of the residents in the selected communities indicates that most of the diseases investigated are very prominent in Bundu, Marine Base and Rex Lawson (table 3). These are the disease counts for each community as reported by their households in the past one year. Respiratory diseases (cough, catarrh, asthma) collectively show results in Bundu(56.6%), Marine Base (37.0%) and Captain Amangala (32.1%) respectively. Malaria was equally prevalent in Bundu (30.3%), Rex Lawson (19.0%), and Marine Base (18.1%).Fever and headache were most prevalent in Bundu (27.3%), Rex Lawson(21.3%) and Marine Base (18.2%). However, the most prevalent diseases reported in the past one year in all the selected communities are the sanitation related diseases (diarrhoea, typhoid and cholera). Cholera was reported most in Bundu (45.5%) and Marine Base(45.5%). Other sanitation diseases (diarrhoea and typhoid) were also prominent in Bundu(65.1%), Andoni (40.1%) and Rex Lawson (29.5%). Similarly, skin diseases which include skin rashes, eczema and worms were mostly reported in Bundu (55.3%), Marine Base (43.4%) and Rex Lawson (29.5%). This is expected in communities where majority live in rooming houses, with an average household size of 6 living in one crowded room in buildings that do not have enough spaces in between them impeding air circulation. On the other hand, the diseases of the stomach investigated are worms and ulcer. Worms in Rex Lawson (29.4%), Marine Base (24.5%) and Bundu (21.6%) as well as ulcer in Rex Lawson (25.9%), Bundu (20.7%) and Andoni(17.2%) were reported respectively. In conclusion, Bundu had the most reported cases of almost all the diseases, especially, cholera and other sanitary related diseases, followed closely by Rex Lawson and Marine base communities.

It can also be concluded that the most prevalent diseases in all the communities are sanitary related diseases followed by malaria, respiratory diseases and then skin diseases. The reason for the high prevalence of the sanitation diseases is directly attributable to the poor environmental conditions and lack of access to safe sources of water and toilet facilities

4.4 Relationship between household Socio economic characteristics and Environmental Conditions with the Health of the Residents

To further investigate the relationships between socio economic and environmental conditions of the residents with their health status, chi square tests were utilised to ascertain some associations.

First, a group of socio economic variables were tested against the health seeking behaviour of the residents, secondly, some environmental and housing variables were tested against the sanitation related diseases and, lastly some socio economic variables against prevalent diseases. The detailed results are shown in table 4, and discussed below.

The first group of relationships have thrown up some very significant associations at 5% level of significance. The Chi-square test of relationship between the type of medical facility used by respondents and level of education across the communities revealed that the residents' choices of either hospital, patent medical stores, self-medication or medical service is statistically significant at Bundu (x^2 =20.809,P. value = 0.002),Captain Amangala (x^2 =22.293,P. value = 0.001) and Rex Lawson(x^2 =26.605,P. value = 0.002). The next was the test for expenses on medical bills and monthly income of residents across all the communities which revealed the following results in Bundu(x^2 =37.975,P. value = 0.009), Captain Amangala (x^2=35.178,P. value = 0.019), Rex Lawson(x^2 = 40.687,P. value = 0.004) and Andoni(x^2= 40.931,P. value = 0.004). The implication of this is that the amount of income expended on medical bills can be related to the monthly income of residents in these communities. On the other hand the test on the same expenditure on medical bills with level of education showed significant relationships in Rex Lawson(x^2 =22.499, P. value = 0.032), Andoni (x^2 =21.772, P. value = 0.040) and Emenike (x^2 =9.602, P. value = 0.048) communities.

The chi square test of relationship conducted for expenditure on only drugs and monthly income of residents across the communities at 5% level of significance indicated some highly significant relationships in Marine Base (x^2 =51.626, P. value = 0.000), Rex Lawson (x^2 =32.712, P. value = 0.005) and Andon (x^2 =42.273, P. value = 0.003). Similarly, the same test for expenditure on drugs and level of education of respondents showed significant relationships in only Bundu (x^2 =33.946, P. value = 0.001) and Captain Amangala (x^2 =26.021, P. value = 0.011). The last socio economic characteristics tested was level of education with expenditure on mosquito sprays and this was statistical significant only in Captain Amangala (x^2 =11.454, P. value = 0.003).

It can be concluded that household socio economic conditions in most of the communities play an important role in the residents' health seeking behaviour.

Furthermore, Chi-square tests were also utilised to determine if significant relationships existed between environmental and housing conditions and selected diseases investigated, all tests at 5% level of significance. These include cholera with toilet facilities, cholera with drainage facilities, cholera with kitchen conditions and typhoid with sources of water which revealed fairly significant relationships in Bundu (x^2 =4.000, P. value = 0.046), Marine Base(x^2 = 4.000, P. value = 0.046), Bundu (x^2 = 4.000, P. value = 0.046), and Bundu (x2 = 36.229, P. value = 0.002) respectively. It can thus be deduced that sources of water has a strong relationship with typhoid although significant in only Bundu waterside, and instructively other environmental factors that were tested with cholera also showed some relationships in Bundu. There is no doubt that Bundu waterside needs an urgent intervention in areas of environmental health.

The test of relationship between typhoid fever and kitchen conditions was statistically significant only in Rex Lawson (x^2 = 12.990, P. value = 0.043), while that of diarrhoea and toilet condition (x^2 =7.000,P. value = 0.030) as well as diarrhoea and drainage condition(x^2 =6.000, P. value = 0.050) revealed strong relationships in only Andoni waterside.

The next group of chi-square tests carried out to further ascertain relationships all at 5% level of significance between some diseases and certain socio economic variables include household size and respiratory diseases, malaria with drainage conditions and malaria and gender.

The results shown in table 4 are as follows; for household size and respiratory diseases, there were statistically significant relationships in Bundu (x^2 =32.702, P. value = 0.036), Rex Lawson (x^2 =43.457, P. value = 0.001) and Andoni (x^2 =54.208, P. value = 0.000) while that of malaria and drainage conditions also revealed significant relationships in Rex Lawson (x^2 =13.881, P. value = 0.031), Emenike (x^2 = 13.134, P. value = 0.041) and Andoni (x^2 =20.710, P. value = 0.002) waterside. However, the test of relationship between malaria and gender was significant only in Rex Lawson (x^2 = 10.503, P. value = 0.005).

Table 4: Chi-square Test of Relationships among Socio economic, Environmental Conditions and Health Status of Residents, Port Harcourt, 2013

		Marine Base			Bundu			Captain Amangala			Rex Lawanson			Andoni			Emenike		
		x^2	df	P.Value	x^2	df	P.Value	x^2	df	P.Value	x^2	df	P.Value	x^2	df	P.Value	x^2	df	P.Value
Socio-economic and Health Factors	**MSU * AMInc.**	17.053	10	0.073	9.628	10	0.474	15.763	10	0.107	10.019	10	0.439	11.060	10	0.353	9.635	8	0.292
	MSU * LE	7.869	6	0.248	20.809	6	**0.002**	22.293	6	**0.001**	25.605	9	**0.002**	5.469	6	0.485	3.248	4	0.517
	AMEHB * AMInc.	25.563	20	0.181	37.975	20	**0.009**	35.178	20	**0.019**	40.687	20	**0.004**	40.931	20	**0.004**	14.292	12	0.282
	AMEHB * LE	12.683	12	0.393	16.033	12	0.190	16.547	12	0.167	22.499	12	**0.032**	21.772	12	**0.040**	9.602	4	**0.048**
	AMEHD* AMInc	51.626	15	**0.000**	31.247	20	0.052	21.113	16	0.174	32.712	15	**0.005**	42.273	20	**0.003**	16.393	9	0.059
	AMEHD* LE	9.543	9	0.389	33.946	12	**0.001**	26.021	12	**0.011**	6.949	9	.642	20.056	12	0.066	1.800	6	0.937
	AMEMS*AMInc	7.436	5	0.190	8.384	12	0.754	4.259	4	0.372	12.273	15	0.658	2.876	8	0.942	1.200	2	0.549
	AMEMS * LE	1.149	3	0.765	1.737	6	0.942	11.454	2	**0.003**	5.143	9	0.822	6.840	6	.336	1.600	2	0.449
Environmental /Housing Conditions and Sanitary Diseases	**HCC*SW**	5.000	2	0.082	4.000	3	0.261	a	a	a	e	e	e	a	a	a	e	e	e
	HCC*TF	5.000	2	0.082	4.000	1	**0.046**	a	a	a	e	e	e	a	a	a	e	e	e
	HCC*GD	4.000	1	**0.046**	a	a	a	a	a	a	e	e	e	a	a	a	e	e	e
	HCC*CK	a	a	**a**	4.000	1	**0.046**	a	a	a	e	e	e	a	a	a	e	e	e
	HCT*SW	10.192	9	0.335	36.229	15	**0.002**	1.527	4	0.822	1.218	2	0.544	5.883(a)	6	.436	2.438	2	0.296
	HCT*TF	11.047	6	0.087	11.448	12	0.491	1.911	4	0.752	5.464	6	0.486	9.386	9	0.402	9.286	4	0.054
	HCT*GD	13.441	6	**0.037**	18.990	9	**0.025**	1.143	2	0.565	3.333	4	0.504	3.938	2	0.140	6.313	6	0.389
	HCT*CK	19.802	12	0.07	19.802	1	0.071	5.450	8	0.709	12.990	6	**0.043**	12.984	1	0.370	4.813	4	0.307

	HCD*SW	9.000	4	1 0.061	9.000	2 4	0.061	a	a	a	0.750	1	0.386	0.467	2 1	0.495	a	a	a
	HCD*TF	1.479	3	0.687	1.479	3	0.687	a	a	a	a	a	a	7.000	2	**0.030**	1.333	1	0.248
	HCD*GD	1.286	2	0.526	1.286	2	0.526	a	a	a	a	a	a	6.000	2	**0.050**	2.000	2	0.368
	HCD*CK	4.371	3	0.224	4.371	3	0.224	-	-	-	-	-	-	0.630	1	0.427	1.333	1	0.248
HOH & RD	**HCCC*HS**	25.983	22	0.252	32.702	20	**0.036**	30.467	22	0.108	43.547	18	**0.001**	54.280	22	**0.000**	6.579	12	0.884
	HCA*HS	13.500	12	0.334	13.500	12	0.334	6.000	4	0.199	a	a	a	5.250	6	0.512	3.000	2	0.223
Malaria & Socio-environment	**HCM*CD**	9.127	6	0.167	9.127	6	0.167	6.053	6	0.417	13.881	6	**0.031**	13.134	6	**0.041**	20.710	6	**0.002**
	HCM*GENDER	4.629	3	0.201	4.629	3	0.201	0.406	2	0.816	10.503	2	**0.005**	1.623	2	0.444	0.163	2	0.922
	HCM*AGE	13.485	9	0.142	13.485	9	0.142	12.363	6	0.054	6.729	6	0.347	3.702	6	0.717	2.771	4	0.597

Summary of findings from the Focus Group Discussions in the various communities show a lot of similarities in land tenure and community governance systems. The most instructive was how organised the communities were and how the informal governance structure was key for any interventions possible. Most of the community leaders were very educated and understood the political issues in Port Harcourt as it affects their development.

Generally, the land tenure system as well as developmental efforts across the communities is communal. Expectedly, the significant occupations of the communities are based on the peculiarities of the communities, For example, majority of the residents in the waterside communities are fishermen so they dominate.

Furthermore, participants said they had no health insurance in place and there is a near absence of government hospital in place across the communities. There is usually low reportage of diseases in questionnaire instruments but this was fairly achieved during the discussions as the health information helped corroborate the most prevalent diseases reported in the survey.

5. CONCLUSIONS AND RECOMMENDATIONS

The main thrust of this work has been to investigate the possible interface between the Socio-economic attributes, human environmental factors and household health outcomes in six low income informal squatter settlements in Portharcourt Nigeria.

It is discovered in this study that the socio-economic attributes of the households and their affecting environmental factors tend to be consequences of the specific health issues observed in the six locations studied in Port Harcourt, Nigeria. The common diseases in the communities which are basically sanitation environmentally driven are cholera, diarrhoea, malaria, respiratory and skin diseases arising possibly from poor environmental conditions and lack of safe water and other sanitation sources in the study area.

It is important to note that the communities share common environmental and socio-economic background and unexpectedly environmental health status, in which case the problem is not space specific but rather generic. The relationships are very much displayed in the various chi-square tests results in the text.

The study calls for a potent and community driven urban renewal efforts, first to improve on the existing air spaces around buildings and by and large to provide access and locations to facilities that could make life better for the hitherto almost neglected people of the informal squatter waterfront settlements in Port Harcourt in Nigeria. This exercise if carried out will also facilitate the issuance of land tenure documents for the inhabitants. This work also provides a good working threshold for the government and non- government agencies who may wish to intercede or collaborate with the people in the study area for a meaningful development agenda.

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URBAN PLANNING, DEMOLITION OF PROPERTY AND CITIZENS' DEPRIVATION IN AFRICAN CITIES: A POLYCENTRIC PLANNING PERSEPCTIVE

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ABSTRACT

This paper used the Institutional Analysis and Development (IAD) framework to analyse the missing links between urban managers and urban residents in Angola, Ghana and Kenya. The paper found that urban governance structures in the three countries are centralised and deviate from planning norms and people-centred governance, hence urban managers and citizens are not operating in synergy. The rapidly growing urban population makes infrastructure to be deteriorating; thus, creating slums and squatter settlements that warrant eviction and demolition by governments. Eviction and demolition generate adverse consequences on socio-economic wellbeing of citizens – property destroyed, while children education was affected. This paper provides case studies to demonstrate principles and practices needed to make polycentric planning and community initiatives resolve conflicts of interests on urban space. The paper argues that, for urban governance to benefit urban residents, it has to proceed from the people and be guided by them in decisions on all urban matters, including planning and modification of plans on competing urban landuses. Using Polycentric Planning and Poverty Reduction Strategy (PPPRS), this paper designs an African Polycentric Urban Environmental Governance Model (APUEGM) capable of mainstreaming citizens-centred institutions in urban areas into socio-economic and political decision making so that citizens (including the urban poor) can participate effectively in decisions on redevelopment, thus entrenching good urban governance, citizens-centred environmental planning and development in Africa.

Key Words: Africa, Cities, Demolition, Planning, Polycentricity

1. INTRODUCTION

Sub-Saharan Africa has long been one of the least developed and least urbanised regions of the world with most sub-Saharan African economies still heavily dependent on subsistence agriculture. Nevertheless, the region has absorbed relatively high rates of urban growth over the past 50 years.

In 1950, only 15% of the Africa population was living in towns or cities, while 39.9% lived in urban areas in 2000 (Satterthwaite et. al., 2010). By 2030, about 53% of Africa's population is expected to be living in urban areas (Cohen, 2004). With this urbanisation rate and trend, the present quantity and quality of infrastructure and services that are inadequate will become more acute and worsen urban environmental degradation in the continent. For example, less than 15% of the effluent generated in Accra, Ghana is effectively treated (Government of Ghana, 2007).

Urban Environmental Poverty (UEP), an off-shoot of urban environmental degradation, is predicated upon poor governance. In spite of the rapidly growing urban population in Africa (at 3.6 growth rate, the highest among world regions) (Cohen, 2004), infrastructure that are incentives for entrepreneurial development and nerves of urban economy are increasingly deteriorating. As expected, cities in Africa are not serving as engines of growth and structural transformation. Instead they are part of the cause and a major symptom of the economic and social crisis that have enveloped the continent (Cohen 2004). Consequently, the majority of the urban poor have ended up building their own water and sanitation facilities which are often of poor quality due to lack of support from the local authorities (Osumanu, et. al. 2010). These diverse coping mechanisms conflict with one another and some of them are affecting urban beauty and healthy conditions as manifested in uncollected solid waste, urban ghetto, proliferation of slum, squatter settlements, erection of structures on waterways that cause flooding, over-stretched, or non-existent sanitation services, drainage, etc.

Since UEP reduces urban beauty, leadership tends to use force in addressing such urban problems without consulting the citizens. Whereas good governance entails a common thought between the leadership (elected) and the followership (electorate) with citizens playing active role in decision making, the response of African leaders to squatter settlements and slums usually takes unidirectional approach with exclusionary tendency – eviction and demolition. Eviction and demolition generate adverse consequences on socio-economic wellbeing of cities' dwellers. These actions of African governments have been viewed as vectors of poverty, repression, and deprivation that invariably, breed aggression and future restiveness among youths, especially those whose parents' homes were demolished when they were young.

This confirms that African governments have no respect for the rights of their citizens to shelter as demonstrated by several cases of demolition and forced eviction of citizens. In Angola, 5,000 homes were destroyed (Croese, 2010), while over 75,000 houses in the Nigeria's capital, Abuja were demolished (Harris, 2008; Ogun, 2009). Other cases of police-military brutality against citizens have been reported in Kenya where about 9,600 people have been left homeless (Mulama, 2004).

Using the Institutional Analysis and Development (IAD) framework, this paper employs empirical data to analyse the missing links between urban managers and urban residents on the methods and processes of demolition of property in selected African cities – Angola, Ghana and Kenya. This paper raises a question that borders on how the participants (urban managers and citizens) are interacting on the issues of slum/informal settlements, resettlement, evictions and demolition of property. Are they reacting to the problem of informal settlements synergetically as a group or disjointly?

The paper found that urban governance structures in the three countries are centralised and deviate from planning norms and people-centred governance, hence urban managers and citizens are not operating in synergy.

They operate on parallel lines, thus confirming the problems of disconnect and parallelism. This paper considers critical the place of a shared vision of both how the world works and how we would like the world to be. Analysis and modeling appropriate to the vision via new institutional arrangements for implementation are also very crucial for resolving the crisis of demolition and evictions in African cities.

In order to accomplish people-centred urban planning, on redevelopment and service delivery, this paper adopts a polycentric governance system, which emphasises high level of public accountability, locality and the control of community affairs by the people (Olowu, 1999). Polycentric governance also relate with polycentric planning. While polycentric planning is a process, polycentric governance is a system that takes effect after planning and implementation of any project. Polycentric planning is a deliberate act of setting up multilayered and multicentred institutional mechanism that regards self-governing capabilities of local communities as foundation for reconstituting order from the bottom up. It can also be described as the process of ordering the use of physical, human and institutional resources as well as engaging the citizens in contractual relations with the public authority (Akinola, 2010a, 2011a).

This paper is concerned with a sort of systemic, cordial and collegial relationships between urban poor and their governments in socio-economic and political decisions. The major concern of this paper, therefore, is to design multi-layered and multi-centered institutional arrangements to reflect the aspirations and needs of citizens in the area of urban redevelopment in Africa. The new institutional mechanism will enable the people to have a robust political dialogue at federal/central, state/provincial and local levels in order to reposition urban councils to effectively manage urban environment. Using PPPRS, this paper designs African Polycentric Urban Environmental Governance Model (APUEGM) capable of mainstreaming citizens-centred institutions in urban areas into socio-economic and political decision making so that citizens (including the urban poor) can participate effectively in decisions on redevelopment, thus entrenching good urban governance, citizens-centred environmental planning and development in African cities. This outcome of this analysis and model will produce a new body of knowledge that is necessary for decisions and policies that can positively touch the lives of urban poor in African cities.

The paper is organised into six sections with the first section containing the introduction, while the second presents the theoretical underpinning upon which the paper is anchored. The third section analyses cases of demolition and evictions, while the fourth part discusses the resilience of SGIs in urban affairs in Africa. The fifth section presents polycentric planning and a new urban governmentality, while conclusion is drawn in section six.

2. METHODOLOGY

The methodology used in this paper is the Institutional Analysis and Development (IAD) framework, which is an analytical tool for diagnosing problems and challenges in human society and for proffering possible solution (Ostrom and Ostrom, 2003). The IAD framework has three components - exogenous variables or context, action arena and evaluative criteria. Since society is a system of human cooperation, people in any society should collectively relate to and deal with their exogenous variables. This normally starts when people (participants) within an organization/community (action arena) respond to exogenous variables or context (biophysical/material conditions, cultural and other attributes of a community, and rules-in-use) by engaging in community projects/programmes – water supply, sanitation, electricity, roads, etc.

When outcomes of the engagement on projects are positive the participants will increase their commitment to maintain the structure (system of operation) as it is or move to another set of exogenous variables and then on and on like that. However, if outcomes are negative, participants might raise some questions on why the outcomes are negative. They might then move to a different level and change their institutions to produce another set of interactions and consequently, different outcomes. It is important, however, that rules 'crafters' (designers) understand the interplay between actions and outcomes as the duo interlinked.

In the context of this paper, the participants are urban managers and citizens who supposed to interact and operate in synergy. The questions this paper is raising border on how the participants are interacting on the issues of slum/informal settlements, resettlement, evictions and demolition of property. Consequently, the paper employed empirical data on demolition of property in Angola, Ghana and Kenya and appraised the efforts of Self-Governing Institutions (SGI) in resisting the barbaric actions of governments and at the same time, in opening up alternative and complementary ways of addressing the problems of slum and informal settlements.

3. THEORETICAL UNDERPINNING

In order to contextualise the line of analysis in this paper, polycentric planning, an off-shoot of the Institutional Analysis and Development (IAD) framework is adopted. Polycentric planning recognizes the fundamental defects in the centralist model of planning and the persistence failure of the state to meet the collective yearnings and aspirations of the citizenry. As a result, polycentric planning has called attention to the self-governing and self organising capabilities of the people that are rooted in collective action at community level.

The theories of collective action suggest that individuals under certain institutional arrangements and shared norms are capable of organizing and sustaining cooperation that advances the common interest of the group in which they belong (Ostrom, 1990). This line of thought recognizes that human beings can plan, organize and govern themselves based on appropriate institutional arrangements and mutual agreements in a community of understanding. The IAD believes in institutional arrangement designed by people who cooperate based on rules and constitution of their choice, and thereby are able to resolve socio-economic and techno-political problems which other people (external to their conditions) are not capable of doing for them. Institutional structures that people have developed over the years avail individuals in the community to make inputs to development in their locality by contributing towards projects (labour, finance and materials) and decision-making in political arenas in community settings.

The study of institutions using the IAD has produced the concept of polycentricity that recognises the potentials of individual citizens in ordering public affairs. Polycentricity is a means of achieving bottom-up governance for poverty reduction in developing countries. According to Vincent and Elinor Ostrom (2003), polycentricity simply means a system where citizens are able to organize, not just one, but multiple governing authorities, as well as private arrangements, at different scales. According to Sawyer (2005), institutional analysis helps us to better understand how individuals within communities, organisations and societies craft rules and organise the rule-ordered relationships in which they live their lives. Relating institutions to Africa, the governance systems and rules that sustained them were inspired by European traditions, while the peoples in diverse language communities and ways of life in the continent were ignored (Ostrom, 2006) and their governance structures were denigrated.

This is where elite leadership in Africa could not respond appropriately. The new urban system in Africa reflects a colonial economic framework, which partitioned urban space into two highly uneven zones: a "European" space that enjoyed a high level of urban infrastructure and services, and an "indigenous" space that was marginally serviced (Stren & Halfani, 2001). Different planning standards were specified for the various segments of the city with physical planning and infrastructure provision concentrated in the European or Government Reservation Areas (GRAs), while African Residential Areas or Poor Reservation Areas (PRAs) were neglected (Akinola, 1992b). After independence, the population of many African cities grew rapidly, basically in the absence of significant industrialisation. A combination of centripetal and centrifugal forces generates uncontrolled urbanisation that leads to mass movement of people from rural to urban areas (Cohen, 2004:45).

There is correlation between urbanisation, environmental problems and urban poverty (World Resources Institute, 1997). Uncontrolled urbanisation warrants the development of urban ghettos and slums that house millions of citizens across African cities. For example, in Ghana, at least 50% of the population resides in urban areas of which only 18 per cent have access to improved sanitation (WHO/UNICEF 2010). Uncontrolled urbanisation in South Africa generates unprecedented growth of shacks and informal settlements, where 2.4 million South Africans live in informal settlements across the country (Ikokwu, 2007). Recent statistics show that approximately 10.5 million people in South Africa do not have access to basic sanitation services (Notywala, 2011).

It is the combination of these environmental health hazards that partly warrant the clearance of urban slums and eviction of citizens from their homes by public officials. Forced evictions remain a common means by which land occupied predominantly by the poor and low-income groups is cleared for redevelopment, which is beyond the financial ability of the poor and low-income groups. This confirms that the elite propagate neocolonialism that marginalizes the people and impoverish them.

Since elite leadership have faltered, it is imperative to search for alternatives on how to appropriately address the needs and aspirations of the urban poor in Africa. Incidentally, citizens in urban areas have been able to respond by exploring pre-colonial governance heritage and to certain extent have been able to address their daily needs (Gellar, 2005; Akinola, 2010a, 2011a). The argument of this paper is that since human societies are based on systems of cooperation, models that are designed to address problems in human societies cannot be effective except such models take cognizance of the underlining factors that underpin human cooperation. Unfortunately, models, policies and programmes that were applied in Africa relegated to the background essential elements of Africans' systems of cooperation such as collectivity, mutual trust and reciprocity that exist with the diverse peoples of Africa, who are mostly non-elite. With these alienating conditions entrenched in Africa, policies and programmes of African governments find it difficult to impact positively on the lives of African citizens in urban areas. The next section discusses cases of demolition.

4. CASES OF DEMOLITION AND FORCED EVICTION OF CITIZENS IN AFRICAN CITIES

4.1 Rebuilding by Demolishing Citizens' Welfare in Angola

In March, 2010 in order to make way for public construction of infrastructure in the city of

Lubanga in Angola, riot police killed seven people, destroyed 2,000 homes, while almost 3,000 families were evicted with only 700 tents distributed to provide temporary shelter for some families in Tchavola, where there is no basic sanitation and little access to electricity, food or blankets. In 2009, an estimated 3,000 homes affecting 15,000 people were demolished in the capital city of Luanda (Croese, 2010). The 15 days' notice was too short for the victims to prepare new shelter. The effects of demolition on people are disastrous and these include: (1) Heavy damage and substantial destruction of people's homes, properties, gardens, businesses, livelihoods, etc; (2) People were concentrated in a camp with tents without the minimum conditions in terms of environmental sanitation that signals epidemics; (3) The "concentration camps" are 10 kilometres from the city center; (4) Some schools had to suspend classes because they were occupied by the homeless (5) Many children were forced to suspend classes because they were homeless and placed in distant areas of the school where they usually studied; (6) Families slept in the open with small children without food assistance (Samacumbi, 2010). Unfortunately, the governor of the province of Huíla justifies the evictions as a necessary adherence to the law, which he views as more important than humanitarian considerations. In spite of the fact that citizens have documents from municipal authorities proving legal residence and compensation for their losses, they were disappointed as the state regarded the people's action as a violation of the Law of the Land (Croese, 2010).

4.2 Police Brutality Suppressed Protests against Demolition in Ghana

There were several cases of demolition in Ghana in recent times. Nearly 100 houses in Tuba, Ga South District of the Greater Accra Region, were pulled down on Saturday, December 11th 2010 by a police cum military team, in spite of a court injunction against the demolition exercise. About 10 bulldozers were brought to the area for demolition and in the process, quite a number of people sustained various degree of injuries, including some journalists. Similarly, the residents of Oblogo-Weija were up in arms in December 2010 against the Ga South Municipality of the Greater Accra region of Ghana over attempts to raze down some plush houses (Beeko, 2011). In a related case, a demolition exercise, jointly undertaken by the Tema Metropolitan Assembly (TMA) and the Tema Development Corporation (TDC), in certain parts of the metropolis along the Ashaiman-Nungua main road has attracted public criticism. The demolition exercise was halted (after 16 structures were pulled down) by a massive protest of over 100 landguards who threw stones and other dangerous implements at the police and military personnel.

It was evident that the 'demolishers' and 'wasters' of citizens' resources did not give ample notice and time to allow owners of the structures to organise themselves properly (Attenkah, 2010) in spite of the UN and international guidelines for forced evictions. One thing that is clear is that these demolitions compound the already grave problem of homelessness, inadequate housing and poverty, particularly for women whose right to housing is already not adequately protected.

4.3 Bulldozers Drove Eight Month Old Baby into Heavy Downpour in Kenya

Traders at Nairobi's Kangemi market were angered by Council Askaris's action in demolishing their market in the night without prior notice, after they had just settled at the site consequent upon forced eviction out of the roadside market. They engaged police in running battles by taking to the streets and blocking the road with stones and logs. In reaction, police used teargas to disperse the traders who claim they lost property worth millions of shillings during the demolition (Kenyan Business News, July 2010).

A more disturbing case was that of Grace Nduta, mother of an eight months old son, whose shack of cardboard and mud was demolished by bulldozers. All she could do was to cover herself and her son with cellophane and fled into the downpour outside. Along with her were about 4,000 hawkers whose tin-and-wood kiosks were demolished in the open-air stalls located around the city bus station, while the demolishers confiscated clothes and other merchandise. According to the hawkers, they had been at the bus station for 20 years, while the demolition exercises had cost them close to a million shillings (about $55,000). This action has further menaced the already precarious existence of hundreds of thousands of people in Nairobi, where as many as 45% of the estimated 2 million people in Nairobi live in illegal and substandard housing built on public land (Hiltzik, 1989).

Similarly, Kenyan authorities pulled down structures in Kibera, a shanty town. The situation of Leah Kanini, a 15-year-old girl is a case that deserves attention. After having lost her parents to AIDS-related illnesses, she took on the responsibility of caring for her five siblings by selling peanuts to support the household. On Feb. 16, 2004, Kanini returned home to find the family's shack demolished by a government bulldozer. She was confused and with her voice bitter, she said: 'I do not know what to do; I do not know where to go' (Mulama, 2004).

In February, 2004, the first phase of demolitions, without notice, took place in Kibera, a shanty town which is home to about 700,000 poverty-stricken people, often referred to as Africa's largest slum. About 9,600 people were left homeless and families slept outdoors where they have lived for over 30 years (Mulama, 2004). Kibera's crisis confirms the failure of Kenyan government to plan for rapid population growth in the 1980s when the population growth rate was 4%, one of the highest in the world. This shows that the government of Kenya did not live up to the expectation.

3.4 Polycentric Planning Perspective on Demolition and Eviction of Citizens

A common denominator of bad governance and trampling on the rights of citizens in most African countries is 'rebuilding by demolition' and forced eviction of citizens from their homes. It is true that society is dynamic and infrastructure and urban settings of yesterday may not be adequate for today and tomorrow. But there are minimum standards and methods of renewing urban centre such that the welfare of citizens is not jeopardised. In developed democracies, citizens are involved right from the planning stage to the implementation of any programme that affects them. For example, renewal of urban slums is usually preceded by resettlement scheme that provides accommodation for the affected citizens temporarily or permanently and the citizens are regarded as agents of change in such programmes. The situation is contrary in most African countries where due process is not followed.

The International Covenant of Economic and Social Rights, which all countries had ratified, laid down guidelines for carrying out eviction. The guidelines state, among other things, that forced evictions must only occur in exceptional circumstances and provided certain conditions are followed. The conditions include adequate consultation with the persons affected and the provision of alternative resettlement in a safe and appropriate location. Similarly, International human rights law demands that before forced eviction is carried out, States should give to persons affected, the opportunity to challenge the eviction or demolition order and to propose alternatives (Ghana News, 2010). Unfortunately, most demolitions across Africa were carried out in defiance of citizens' rights and International Covenant of Economic and Social Rights.

Under international human rights law, everyone has a right to adequate housing as a component of the right to adequate standard of living.

The right to adequate housing includes, the right to protection against arbitrary or unlawful interference with privacy, family, home, and to legal security of tenure. Apart from issues of the right to adequate housing, including the right to be free from forced evictions, the right to life and security of the person are human rights which are frequently violated during forced evictions and demolitions.

Taking all the three cases together, the methods employed by public officials in carrying out demolition exercises runs counter to the basic principles spelt out in the UN guidelines on development-based evictions and displacements, which enjoins authorities not to allow evictions as well as demolition exercises to take place in bad weather, at night, and by implication at dawn, during festivals or religious holidays, prior to elections, or during or just prior to school examinations and in circumstances that do not afford the victims the opportunity to recover their properties.The critical issue that needs to be adequately addressed in connection with demolition exercise is the responsibility of public officials who have the duty of monitoring and stopping the construction of illegal structures and who usually play the Ostrich and allow illegal structures to be erected. On the scale of culpability, these officials by their omission in allowing these illegal structures to be constructed in the first place bear the greatest responsibility. They have contributed significantly to the problem of illegal structures across African cities and therefore, should be held responsible.

How can institutions designed for human society give a month or seven-day quit notice to a person who has resided in a house built through his/her sweat, for a period of 20 to 30 years or more? The number of quit notice allowed under planning law is inadequate when viewed against the multiplicity of problems confronting those who were evicted. How do we explain the demolition exercises that were carried out at dawn in Ghana and at night in Kenya where victims lost all their personal belongings and other valuable property contrary to UN guidelines? How do we explain the demolition of houses in these countries where governments refused to pay compensation to property owners who had legal documents that supported their property?

These all points to the facts raised earlier in this paper that urban managers in Africa operate with exclusionary tendency as they do not involve the citizens in their decisions on urban affairs that concern the people. African governments are culpable in two ways simply by: (1) not designing and implementing comprehensive plans that take account of urbanisation and future development and (2) by allowing structures to be built and later demolished after citizens have invested their resources in such structures. A polycentric approach to urban re-development emphasizes people-centred and community-oriented planning in ways that emphasize inclusiveness, nondiscrimination, accountability, transparency and popular participation.

The fundamental questions, therefore, include the following: How did the affected peoples cope and how are they coping in circumstances they found themselves? What lessons can we learn from these people-centered adaptation strategies? The next section discusses the resilience of self-governing institutions in urban Africa.

5. THE RESILIENCE OF SELF-GOVERNING COMMUNITY INSTITUTIONS IN AFRICAN CITIES

If men are to remain civilised or to become civilised, the art of association must develop and improved among them at the same speed as equality of conditions (Tocqueville, 1988:517).

The people at the community level in Africa have no confidence in those who run African governments, hence, they invest their sovereignty horizontally in one another through collective action and self-organising and self-governing capabilities and thereby, to an extent, addressing daily challenges – education, health, community hall, postal service, security services, road repairs and other essential services. They achieved these through various forms of associations and community institutions (not donor civil society) by revisiting and reviving their old traditions. The people relied on institutional arrangements, shared norms and mutual agreements in a community of understanding that enabled them to sustain cooperation and advance the common interest of the group in which they belong. It is institutional structures that the people have developed over the years that availed individuals in these communities to make inputs to development in their locality by contributing towards projects (labour, finance and materials) and decision-making in socio-economic and political arenas (Akinola, 2005d, 2007a, 2008b, 2011a).

Empirical evidence in Ghana buttressed the resilience of SGIs as innovative and inspiring examples of locally-driven water and sanitation initiatives in urban areas. People's Dialogue Ghana (PDG) in Ghana's urban areas is a community-based institution that works in partnership with the Ghana Homeless People's Federation to find permanent solutions to urban poverty through the improvement of human settlements and shelter conditions. Since its formation in 2003, PDG has been working in slums and informal settlements in Accra, Tema, Kumasi, Takoradi, Afram Plains, etc. (Osumanu et. al. (2010).

PDG emerged in the process of stalling forced eviction organised by the local authority in 2002. The residents of Old Fadama in Accra formed a Federation (now known as Ghana Federation of the Urban Poor, GHAFUP), supported by People's Dialogue Ghana (PDG), to engage and negotiate with local authorities and prevented the evictions. In 2005, PDG and GHAFUP established a formal engagement between Federation members and the government/local authorities, where an agreement was reached to stall the eviction, thereby marking the beginning of a shift from forced eviction to dialogue, engagement and partnerships.

Consequently, there emerged a government plan to relocate residents of Old Fadama under a planned Adjin Kotoku New Town Development Project that involved Ministries of Local Government, Rural Development and Environment, Water Resources, and Works and Housing. PDG and GHAFUP are members of the Relocation Project's Implementation Task Force and have been commissioned to collect socio-economic and physical base data of both the Old Fadama area (one of the communities to be relocated) and of Adjin Kotoku. With support from Shack/Slum Dwellers International (SDI), a settlement profile was completed (Osumanu, et al., 2010).

Additionally, PDG negotiates with financial institutions on behalf of the Federation to acquire loans at concessionary rates for housing infrastructure development and economic empowerment. Globally, Federation groups and support organisations have a vision of an alternative world. This vision is backed up by practice, customs and approach. The tools used are simple enumerations, savings groups and community meetings. These simple tools have helped in developing a new culture of care and nurturing – talking to residents, gathering information, identifying problems and seeing how as a community they can begin to solve problems.

PDG builds on and fosters community-led initiatives to meet the basic housing needs of the urban poor.

So far, the approach has had significant impact not only in terms of generating household and community demand for housing and related facilities but also in terms of fostering individual behaviour which facilitates access to services and promotes the development of a self-sustaining demand and supply mechanism. This remarkable achievement in Old Fadama is an inspiration to other settlements which face similar challenges in slums and informal settlements. By December 2009, the Federation had expanded and established active groups and functional offices in Ghana's five major urban centres, Accra, Kumasi, Tamale, Takoradi and Tema. In terms of scale, the Ghana Federation currently has over 8,500 family members belonging to about 95 savings groups and covering seven out of the ten administrative regions of Ghana. The Federation has national visibility and is recognised by urban state and non-state actors (Osumanu, et al., 2010).

These examples provide a basis for better understanding of how to identify and build upon local initiatives that are likely to improve public dialogue and interaction on water and sanitation services. Local people have been able to consider various possible alternatives to many current coping and management strategies, especially revitalising public dialogue that has been missing for many years. Meetings and community gatherings are important opportunities for people to voice their opinions in public. If these institutions are viable (though not perfect), the question then is how do we connect them to the formal government structure? This is instructive for the formation of self-governing community assembly in African cities (Akinola 2010a, 2011a).

However, there are no concerted efforts on the part of African governments to rally round these community-based institutions for synergy and co-production on urban amenities and development. The pertinent questions is: What hinders Ghanaian government from learning from the example of People's Dialogue Ghana within its domain in Accra in 2005 before adopting barbaric approach in demolishing homes in December 2010? The lesson we can learn from these cases is how these SGIs can be used to re-constitute socio-economic and political order from the bottom-up and to serve as alternatives and/or complementarities to the modern state institutions (Akinola 2011a).

Some questions are raised and they include: Are there some roles citizens and the poor should play in the process of reconstructing urban public sphere and participating in public debates to resolving urban environmental degradation and poverty in Africa? What are these roles? How can urban public sphere be reconstructed to allow citizens at community level to be involved in decision making, rule-monitoring and enforcement of sanction on rule infraction?

6. POLYCENTRIC PLANNING AND A NEW URBAN GOVERNMENTALITY

Analysis and discussions show that there is the need for new institutional arrangements that will enable African state to reposition urban managers to deliver inclusive planning policies and strategies as well as public services and poverty reduction incentives on the one hand and evolve appropriate rural industrialisation and employment generation programmes that can stem the tide of rural-urban migration on the other hand. The paper considers imperative the application of pragmatic and problem-solving home-grown model to the identified challenges.

6.1 Polycentric Planning and Poverty Reduction Strategy

Polycentric Planning and Poverty Reduction Strategy (PPPRS) provides incentives for synergising the efforts of the state (public officials) and community institutions (citizens) towards poverty reduction starting from community/local level.

It is a multi-layers and multi-centres institutional arrangements that connect the stakeholders synergistically to resolving urban environmental crisis through collective action. There are some fundamental imperatives of collective action within development arena. These are collegiality, mutual trust, reciprocity and shared understanding. It is the realisation of these imperatives through constitutional reforms, effective planning and institutional arrangements that can enable the people and their leaders to work together to achieve meaningful progress (Akinola 2010a, 2011a).

Cooperation requires deliberation. That is why deliberative democracy is considered more appropriate for Africa (Akinola 2011a). For example, one of the proud inheritances of South Africa's democracy is public dialogue in the form of community forums, negotiations, and imbizo (Zulu language that means a "gathering"). Community forums have been part of social movements in the fight against both apartheid and post-apartheid inequalities. Negotiations proudly characterised the transition to democracy which is based on principles of nondiscrimination (Hartslief 2005:1). The equivalent of imbizo among the Yoruba of Western Nigeria is igbimo ilu (town court of legislators), opuwari among the Ijaw in Bayelsa State and mbogho among the Efik and Ibiobio of Cross River and Akwa Ibom States and Mai-angwa among the Hausa-Fulani of Northern Nigeria. It is high time Africans looked back in retrospect to learn from their roots by harnessing certain self-governing principles that are inherent in their cultural/traditional heritage to address urban challenges.

It is this type of self-governing and self-organising arrangements that can be integrated into the formal system of government in African urban areas. This, invariably, would lead to effective cooperation and deliberation between and among public officials and citizens at community/ward level, thereby eliminating gaps between the two groups. The application of PPPRS in Africa would enable a reduction of vulnerability by resolving urban environmental, socio-economic and cultural challenges in the continent. Using PPPRS, African Polycentric Urban Environmental Governance Model (APUEGM) is designed.

6.2 African Polycentric Urban Environmental Governance Model (APUEGM)

In order to enable urban managers in Africa effectively deliver urban services and respond to yearnings and aspirations of urban citizens, this paper designs African Polycentric Urban Environmental Governance Model (APUEGM). The APUEGM is diagrammatised in Figure 1. The first part of the model (Nos. 1-10) displays the failure of centralised, monocentric and monocratic systems of governance (No. 1) occasioned by elite driven structurally-defective institutional arrangement that has resulted into exclusion (No. 2) and consequent dualistic economy and policy (No. 3). The problem of centralised system of governance is that citizens have no input into decision, planning, execution, monitoring, evaluation and assessment of public goods and services, especially from conception to implementation. What usually happens is that decisions are taken at the seat of power "far away" from citizens. As a result, mistakes and errors in planning and decisions are not easily amenable when they are discovered. Even in emergency cases, local officers still require approval from high-level bosses who are secluded from the citizens; thus, subjecting destiny of citizens to whims and caprices of rigid bureaucratic decisions. Invariably, centrally motivated strategy leads to increasing socio-economic and political dependency, heightened mass poverty and choking of local initiatives.

Dualistic economy and policy produce two environments within African cities – Government Reservation Area (GRA) for the elite (No. 4a) and Poor Reservation Area (PRA) for the non-elite (No. 4b). While all the good things of life are available within the GRA with little population and high percentage of resources (No. 5a), the PRA is highly populated with small resources and lacks basic services (No. 5b). The later is described as slums, urban ghetto, shacks and informal settlements (No. 6). What is common in the slums is scarcity of good things of life with attendant struggle and aggression (No. 7). The only plan the elite have for the slum dwellers is demolition and evictions as good riddance, which is a violation of human rights and injustice (No. 9a). With evictions, things fall apart for the slum dwellers in socio-economic terms (No. 8). As a result, poverty is deepening and human misery is heightened, thus generating aggression and violence on urban streets. The use of police in dispersing protesters and rioters further complicates matters as citizens are killed and property destroyed; thus leading to the second level of aggression (No. 9b); this time, against the state. This aggression usually takes the forms of urban violence, crisis and vandalism (No. 10) – failed urban governance. This failure requires a rethinking and a paradigm shift on urban governance (No. 11a) to an inclusive institutional framework that would be appropriate for cities dwellers – elite and non-elite – in Africa.

The second part of the model (Nos. 11-19) displays the way forward, especially on the role of African scholars in rethinking urban governance by charting possible courses of actions on how urban mangers can work with citizens in synergy. Rethinking urban governance requires the imperatives of urban realities (No. 11b) to be factored into a new urban governmentality (No. 12). Urban realities should be viewed and analysed via exogenous variables (socio-economic and institutional factors) (No. 13a). The paradigm shift in governance demands a new institutional arrangement through restructuring whereby the efforts of the stakeholders in the public terrains – politicians, bureaucrats, technocrats, NGOs, youth, unemployed persons, self-governing institutions, etc. – are synergised. Since political factor determines the operation of other sectors of the economy, restructuring the public sphere becomes central to resolving urban governance and development crisis (Akinola 2011a).

At the heart of restructuring the public sphere is the operation of Self-Governing Community Assembly (SGCA). The stakeholders/participants would operate using rules that are crafted by members at the SGCA. Rule crafting takes place at three levels – constitutional, collective choice and operational (see Akinola 2010a, 2011a). The activities and operations of SGCA will be facilitated by associationalism using African Polycentric Information Networking (APIN) (No. 13b) for creating networks between the leaders and the people for effective information sharing and communication (Akinola 2008p:188-189).

The SGCA should be patterned after imbizo, igbimo ilu, opuwari, mbogho, Mai-angwa, etc. but modified to include representatives of governments with their agencies, higher institutions, community institutions, occupational groups, women groups, youth, etc.) (Akinola, 2013m). Since SGCA is a multi-tasks assembly, one of its operations will have to do with education and enlightenment of citizens so that public officials and the people operate within shared communities of understanding. Some of the critical questions that citizens need to address at the SGCA include: (1) What should governments do in terms of urban service delivery and how should they do it? (2) What can people do alone without government intervention? (3) What can people do in tandem with government? (4) How can people handle these issues in numbers 1 to 3? (5) What should be the role of urban citizens in shaping electoral system before, during and after elections to ensure the delivery of dividend of democracy?

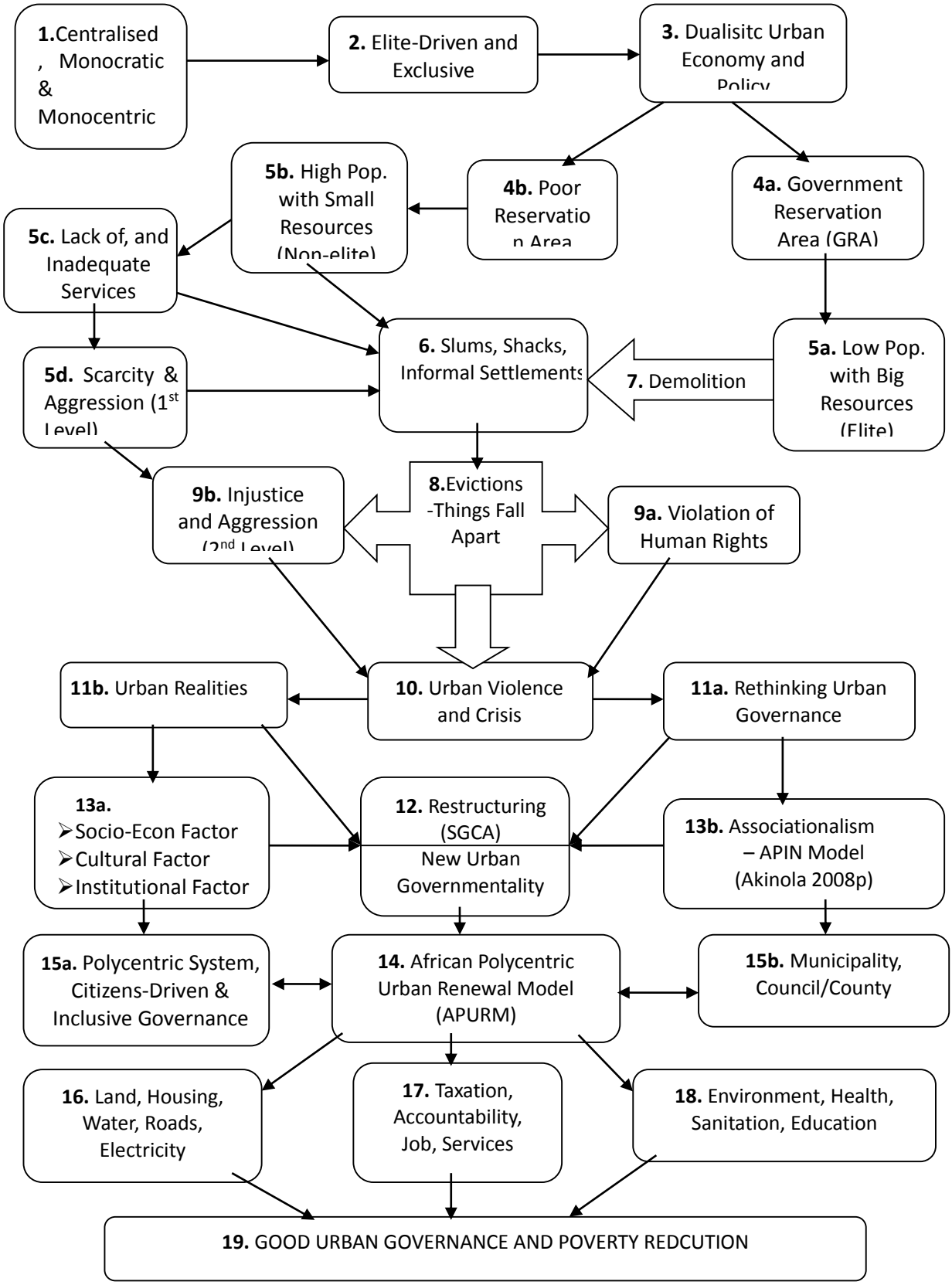

Figure 1: An African Polycentric Urban Environmental Governance Model (APUEGM)

Both leaders and citizens need new orientations, which require some training at the level of SGCA. The leaders need new orientation in community governance and management of community affairs. Leaders should come down to the level of citizens (as proposed in AERD – Akinola, 2008p:192-193; 2010g), while citizens need to be prepared for regular dialogues with their leaders. Conscious effort must be made to recognise and respect local dynamics in addressing the development challenges which slum dwellers face (Akinola and Adesopo, 2014j). It is important to mobilise residents to engage government and city authorities in exploring alternatives for resolving an eviction notice as was done in Ghana in the late nineties and 2005, for examples.

When urban citizens are able to realise that they can and should take full responsibilities in shaping and re-shaping socio-economic and political configurations to suit their daily aspirations and yearnings through active and constructive interjections, especially through the application of African Polycentric Urban Renewal Model (APURM) (No. 14) (Akinola, et. al, 2013b:13-15), then shared communities of understanding would be established. Polycentric system, citizens-driven and inclusive governance (No. 15a) will enable municipal council and urban LG managers (No. 15b) to pursue the goal of housing and infrastructural development (No. 16). When public officials and citizens are able to work together, taxation and accountability (No. 17) will lead to job creation, access to land, affordable housing due to low cost of building materials, job opportunities, good roads, environmental health and sanitation (No. 18), etc. At the end of the day, African countries would experience good urban governance and poverty reduction (No. 19).

The proposed new institutional mechanism would enable African state to reposition urban managers to deliver inclusive housing policies and strategies as well as public services like healthcare, sanitation, education, water supply, electricity, roads and poverty reduction incentives. At the same time, appropriate rural industrialisation and employment generation programmes that can stem the tide of rural-urban migration should be set up.

7. CONCLUSION AND RECOMMENDATION

This paper concludes that centralised, monocentric and monocratic systems of governance occasioned by structurally-defective institutional arrangement in Africa has resulted into exclusion and consequent dualistic economy and policy that favour the few ruling elite, while the majority of African citizens living in slums and informal settlements face danger of evictions and demolition as well as threat of lives in attempts to resist being dispossessed of their property. In order to protect the rights, life and property of citizens, especially the poor in African urban areas, a polycentric arrangement that is inclusive in decision making is inevitable. For urban governance to benefit urban residents, it has to proceed from the people and be guided by them in decisions on all urban matters, including planning and modification of plans. Self-organising and self-governing arrangements that urban poor and/or city residents in Africa have adopted in cooperating mutually in responding to their common problems are imperatives for the attainment of good urban governance, viable democracies and sustainable development in Africa. This is because effective polycentric planning, institutional arrangements and self-governments can act as a check, under certain circumstance, on the excesses of public officials as well as provide greater opportunities for accountable government.

Using Polycentric Planning and Poverty Reduction Strategy, this paper designs an African Polycentric Urban Environmental Governance Model (APUEGM) capable of mainstreaming citizens-centred institutions in urban areas into socio-economic and political decision making so that citizens (including the urban poor) can participate effectively in decisions that concern their lives. The new institutional mechanism would enable operators of municipals and urban local councils to set up governance structures that will avail the people the opportunity to have a robust political dialogue with public officials in order to reposition urban councils to effectively manage urban environment and deliver public services to the people. The emerging new institutional arrangement would, therefore, produce a new urban governmentality that is polycentric, citizens driven and inclusive; thus, entrenching good urban governance, citizens-centred environmental planning and development in African cities.

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FRAMEWORK FOR THE SUSTAINABILITY OF HOUSING CO-OPERATIVES IN SOUTH AFRICA

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ABSTRACT

The current difficulties in obtaining credit for housing, following the global economic crisis, show that private individual home-ownership is not effective enough in addressing the housing needs of the low and middle income groups. As a result of this and coupled with the limited studies in South Africa on co-operative housing at that time, the need to find an option that will solve the housing needs of the people became intense. The study developed a framework for the sustainability of housing co-operatives through the administration of 176 self-addressed structured questionnaires to housing co-operatives based on the strategies identified from literature. The data was analysed using mean score and Cronbach's Reliability Coefficient Test. Based on the findings, framework for sustainable housing co-operatives in South Africa was developed from the strategies. The strategies were categorised into the following factors: policy and legislation; support services; education, training and information; and governance. The framework developed has practical relevance to government officials in the Department of Human Settlements at the Municipal, Provincial and National level in terms of policy formulation in areas of co-operative housing subsector and also the various housing co-operatives in the area of governance of their members. Apart from these categories, the roles to be played by organisations such as South Africa Housing Co-operatives Association (SAHCA), Housing Development Agency, Social Housing Regulatory Agency and financial institutions were enunciated.

Keywords: Co-operative housing, Framework, Housing, Housing co-operative, South Africa

1. INTRODUCTION

In South Africa, as stated by du Plessis et al. (cited by Ross, Bowen & Lincoln, 2010) housing is one of the areas, like in other developing countries, wherein the task of providing it to the teeming population, is daunting. The extent of the housing problem and the lack of delivery in South Africa are shown by the demand for affordable housing and by the number of people living in slums and informal housing conditions (UN-Habitat, 2008). South Africa has been very active in addressing significant issues in housing, including a severe shortage of housing stock and the low quality of living conditions. A national housing programme was introduced in 1994, which extended various types of subsidies to the low income households.

The capital subsidy was sufficient for a secure plot, the installation of water and sanitation services and the construction of a basic house. This initiative resulted in the building of 1.5 million new housing units between 1994 and mid-2003. As at 2010, 2.8 million units have been constructed. Despite the success of this ambitious programme, the country continues to face a substantial housing deficit, with the backlog in terms of need estimated at 2.1 million South African households in early 2010 (Cities Alliance, 2003 cited by UN-DESA & UN-Habitat, 2004; UN-Habitat, 2008; NDoH, 2009; Zuma, 2010; Sexwale, 2010; Ross, Bowen & Lincoln, 2010).

Sexwale (2010a) contends that the National Government is only able to clear the backlog at a rate of 10% per annum. Sexwale (2010a) further states that the resources at the disposal of government, and mindful of the continued high population growth rate and the rapid pace of urbanisation, it could take decades just to break this backlog. United Nations (2004), Napier (2006) and Rust (2006) show that in spite of the success recorded in the first 10 years in the provision of housing to the poor, there are a number of reasons impeding the provision of housing that have contributed to the decline in the number of units built annually since 2000. These reasons for this decline as stated by UN (2004); Napier (2006); NDoH (2009a) are highlighted below:

- The inability of the Social Housing Programme to deliver at scale;
- Non creation of satisfactory integrated housing environments;
- The withdrawal of the large construction groups from the low income market;
- High land costs in advantageous locations;
- Differences in the interpretation and application of the housing policy;
- High building costs in areas where land is more affordable but geological and topographical conditions are not ideal;
- Limited participation from the financial sector in the financing of low-income housing; and
- Significant under-spending on budget for low-income housing by responsible housing departments brought about as a result of capacity shortages, especially at the municipal level.

Rust (2001) states that the approach taken by the Government of South Africa in its housing policy arises from two perspectives. On the one hand, government seeks to address the housing crisis directly through the scale delivery of subsidised housing for low income households. On the other hand, government seeks to create an environment conducive for the operations of the subsidised housing market within the larger non-subsidised market in order to foster growth in the economy. Rust (2001) however, contends that since the policy was released in 1994, various emphases have shifted such as improving the potential for the introduction of a co-operative approach to low income housing. In 1999, the Government's focus shifted to alternative tenure arrangements (one of which is the co-operative housing approach), the needs of the poor and quality construction as against the earlier policy on housing that hinged on quantity. A specific focus on the co-operative model in this regard was the acknowledgement by the then Minister of Housing that:

> *"To date we have lacked a social housing vehicle that allows for beneficiary membership and shareholding in South Africa. For this reason I cannot help but recognise that the Co-operative Housing Model critically requires our attention" (1999 SHF/COPE housing Association report of proceedings cited by Rust, 2001: 65).*

The growth of the housing co-operatives in South Africa has not been encouraging. As at 2010, according to Matsela (2010) there were 58 housing co-operatives recognised by the South African Housing Co-operatives Association (SAHCA) and these were scattered across five provinces (Gauteng-23; North west-11; Western Cape-3; Kwazulu-Natal-10 and Eastern Cape-11), in a country with a population of 44.8 million (UN-Habitat, 2008). The reason for the low number of housing co-operatives in South Africa may be because the environment is not suited to the co-operative housing approach (Rust, 2001).

In a related development, Rust (2001) observes that the limited recognition accorded co-operative housing subsector may be connected with the report submitted by the Social Housing Task Team in 1999 to the then Minister of Housing. Though the report acknowledged the addition of co-operatives within the social housing sector but no recommendation was made in support of co-operative housing subsector. Also, the impact of the recommendations made on the potential growth of co-operative housing subsector according to Rust (2001) was not considered. In addition, most policy documents on social housing lean towards the rental approach to housing delivery. Often, social housing is equated with rental housing in South African policy discussions (NDoH, 2005; Charlton & Kihato, 2006; Trusler & Cloete, 2009 and SHF, 2010). The reason for this may be connected with the way social housing evolved in the country in the 1920s (when it was first introduced to address the working class poverty) and the public rental housing approach from the 1940s.

The importance of encouraging the institutionalization of housing co-operatives as the most practical way of providing housing for the low income group cannot be overemphasized. The challenge relative to the desired outcome is often with respect to mobilizing and organising the population concerned and availability of expert guidance relative to durability, quality, safety and security of the built houses (Mabogunje, 2008). Anonymous (2005) highlights the need to explore co-operative housing models in South Africa as alternative to other housing delivery approaches in the following statement:

"There are also significant complaints from housing beneficiaries around the quality, size and location of the units that have been constructed and the fact that neither the beneficiaries nor the market recognize these houses as social or financial assets. It is clear from what has just been said that we need ways of addressing all of these issues and the co-operative housing models are certainly appealing options, which can and do help to address these problems".

Based on the above, research in co-operative housing could not have come at a better time than now, when there have been cases of people selling off their Reconstruction Development Programme (RDP) houses and the need exists to reconstruct or rectify 40, 000 out of the 2.3 million houses built (Hamlyn, 2010). Above all, the United Nations (UN, 2009) reports that there was lack of research on co-operatives which made it impossible to know how they have impacted the society, this lack of research according to UN (2009) resulted in governments not being able to assess the adequacy or otherwise of the legislation and policies formulated on co-operatives. To this end, the following objectives are set

- To identify the strategies that ensure sustainable housing co-operatives; and
- To develop a framework based on the strategies identified for effective implementation of the co-operative housing delivery approach in South Africa.

The unit of analysis of the study was the members of the 66 housing co-operatives identified from the list (the researcher had to sieve through the list containing all the registered co-operatives for the registered housing co-operatives) obtained from the Registrar of Co-operatives Office at the Department of Trade and Industry, Pretoria.

The study was limited to:

- Housing co-operatives established between 1999 and 2010 formed the sampling frame.
- Registered housing co-operatives (with Companies and Intellectual Property Registration Office [CIPRO] but not necessarily SAHCA) were considered.
- Housing co-operatives having members in the monthly income bracket of 0-R7000 were studied.

The remaining parts of the article are structured in the following way: the literature review (the development of co-operatives in South Africa; the concept of co-operative housing); the research methodology; findings and discussion (these include the proposed framework and the components of the proposed framework) and conclusion.

2. THE DEVELOPMENT OF CO-OPERATIVES IN SOUTH AFRICA

Van Niekerk (cited by Jara & Satgar, 2008) stresses that the history of the co-operative development in South Africa is linked to the way the country was administered. The first co-operative formally established according to Van Niekerk (cited by Jara & Satgar, 2008) was the Pietermaritzburg Consumers Co-operative, registered in 1892 under the then Companies Act 25 of 1892 (Pretorius, Delport, Havenga & Vermaas, 2008). In a study of the co-operatives in South Africa undertaken by the Department of Industry, four main historical trends emerged in the development of the co-operative movement in South Africa (DTI, 2009):

- Agricultural sector co-operatives;
- Homeland (Bantustan) co-operatives;
- Trade union co-operatives; and
- Co-operatives in the informal sector.

The co-operatives in South Africa have a varied history, influenced significantly by the pre-independence and post-independence context in which they emerged. Until the early 1990s, the formal co-operative movement in South Africa was predominantly organised along the lines of registered commercial agricultural co-operatives affiliated with the Agricultural Business Chamber of the South African Agricultural Union (Peet cited by Rust, 2001). The predominated agricultural co-operatives were made possible by the support they received from the Government of the day through formulation of legislation such as the Land Acts of 1913 and 1936. This legislation was aimed at restricting the rights in respect of land ownership, tenure and residence, thereby driving the growth and development of the agricultural co-operatives (DTI, 2009). Since the Government provided the required support by way of formulating beneficial policies and legislation that led to the growth and development of agricultural co-operatives, it will not be out of place to canvass for the same thing to be done by the government for the co-operative housing subsector in order to lift the subsector out of the doldrums.

2.1 The Concept of Co-operative Housing

Co-operative housing according to Rooftop Canada Resource Centre (s.a) is an alternative housing approach that utilizes the principles and processes of co-operatives while housing co-operative is the organisation which responds to the needs of its members by adopting the methods and practices of the co-operative housing system. The use of the co-operative housing approach to solve the housing needs of people has a long history, as documented by UN-Habitat (2006).

Although the approach has not been used to provide houses at scale in most of the places where the approach has been used, countries such as Sweden (18% of the housing stock), Czech Republic (17%), Germany (6%), Norway (15%), Turkey (25%), Austria (8%), Ireland (about 4%) and Estonia (45%) had used the approach to produce houses at scale (ICAa, s.a.; ICAb, s.a.; ICAc, s.a.; ICAd, s.a.; Jaadla, 2002, Pedersen, 2002; Ellery, 2008 and CCMH, 2009). The reason for this, according to UN-Habitat (2006), may be connected with the ways in which the housing co-operatives are structured at the primary, secondary and the apex levels over the years. In addition to this, supportive policy and institutional framework are in place. In many developing countries such as Nigeria, Philippines and South Africa this process of developing the co-operative housing approach is in its infancy, brought about by the failures experienced in other delivery approaches.

Onukwugha (2000) indicates that the need for housing co-operatives originated from the fact that most housing problems in the developing countries can only be solved within the framework of viable, integrated and self-administered communities. Governments of many countries often impose what the governments feel are the solutions to the housing problems of the citizens without a recourse to finding out if such solutions are what the people want or not. In 1996, the Gauteng Provincial Board enabled the approximately 2000 tenants of seven apartment buildings in Hillbrow, Joubert Park and Berea to become owners of the flats they were living in (SHF, 2000; Cull, 2001; Rust, 2001a; Fish, 2003; Crofton, 2006 & NDoH, 2009). This marked the beginning of housing co-operative in Johannesburg inner city and to a large extent South Africa, as there was no prior documented evidence of its use to access the institutional subsidy of government.

3. RESEARCH METHODOLOGY

The paper is part of a larger study that adopted mixed methods methodology (see van Wyk, 2009; Ong, 2003) using combination of quantitative and qualitative approaches; however, this paper reports the questionnaire survey aspect. Mail survey was adopted through the administration of 176 structured questionnaires to the housing co-operatives identified (66 questionnaires to the chairpersons of all the housing co-operatives identified from the list obtained from the Registrar of Co-operatives while 110 questionnaires were administered to the members of the housing co-operatives). Survey design according to Creswell (2009) gives a quantitative description of phenomenon such as trends, attitudes, or opinion of population. Based on the results obtained, generalisation to the population is possible. Collis and Hussey (2003) describe a survey as a positivistic methodology that draws a sample from a larger population in order to draw conclusions about the population. Where the population is small, Collis and Hussey (2003) advise the researcher to use the whole population in the survey. This approach according to Adinyira, Fugar and Osei-Asibey (2011) helps in eliminating sampling errors from the study since the whole population is used. Based on this, the population of the chairpersons was used.

Furthermore, the non-probability convenience sampling method was adopted in the administration of questionnaires to members of the housing co-operatives; this is a sampling method, according to Teddlie and Yu (2007) and Collins, Onwuegbuzie and Jiao (2007), that involves choosing from a sample that is not only accessible but the respondents are willing to take part in the study. The number of questionnaires sent to each housing co-operative was determined by the chairperson of such housing co-operative and was not a function of the number of members in the housing co-operative. The unit of analysis were the members of the housing co-operatives and not the housing co-operatives. A unit of analysis according to Collis and Hussey (2003) refers to the phenomenon under study, about which data is collected and analysed.

In both cases, self- addressed envelopes were included to increase the response rate.

A total of 34 questionnaires (14 from the chairpersons and 19 from the members) representing 19.3% response rate. Sixteen strategies were identified from the literature and respondents were asked on a 5-point Likert scale their level of agreement or disagreement of the identified strategies within the South African context. All the respondents agreed that the strategies identified could lead to sustainability of the housing co-operatives in South Africa if well implemented.

Subsequently, the strategies identified were categorised into four and Cronbach's alpha reliability coefficient tests were conducted. This is to determine the level of correlation among the variables in each categorisation (group). Finally, framework was developed from the categorisation which formed the basis for the conclusion reached. The study conducted by van Wyk (2009) though adopted ground theory and combination of methods, the model developed was largely from the questionnaire survey hence the justification for the use of questionnaire survey in developing the framework.

4. FINDINGS AND DISCUSSION

The table below gives the categorisation of the strategies that respondents agreed that will lead to the sustainability of the housing co-operatives in South Africa if all the role players play their part. According to Gliem and Gliem (2003), Cronbach's alpha reliability coefficient usually ranges between 0 and 1. The closer the Cronbach's alpha coefficient is to 1, the greater the internal consistency of the items in the scale. Gliem and Gliem (2003) conclude that there is actually no lower limit to the coefficient. George and Mallery (cited by Gliem & Gliem, 2003) provide the following rules of thumb in the interpretation of Cronbach's alpha coefficient:

>0.9 – Excellent; > 0.8 – Good; > 0.7 – Acceptable; > 0.6 – Questionable; > 0.5 – Poor and < 0.5 – Unacceptable.

Table 1. Analysis of strategies by means of the Cronbach alpha reliability coefficient

Strategies				
Policy & legislation	**ITC**	**AID**	**CA**	**Decision**
Government should establish an institutional framework that allows rapid and efficient registration of housing co-operatives	0.49	0.87	0.86	Good
Government should consult with housing co-operatives in the formulation of policies and legislation that are applicable to them	0.62	0.84		
Government should promote community empowerment through appropriate legislation	0.80	0.79		
Creation & implementation of appropriate policies and legislation by government	0.72	0.81		
Government should provide the political environment that supports the development and growth of housing co-operatives	0.76	0.81		
Support services	**ITC**	**AID**	**CA**	**Decision**
Government should facilitate housing co-operatives to access support services	0.78	0.89	0.90	Excellent
Financial institutions should develop financing instruments that are beneficial to housing co-operatives	0.78	0.89		
The housing sector should be supportive of housing co-operatives	0.87	0.81		

Education, training & information	ITC	AID	CA	Decision
Government should encourage the development of housing co-operatives	0.75	0.79	0.85	Good
Government should respect the autonomous nature of housing co-operatives	0.67	0.83		
Government should promote the development of technical skills of the members	0.75	0.79		
Government should disseminate information on co-operative housing	0.64	0.84		

Governance	ITC	AID	CA	Decision
Housing co-operatives should put in place well defined management and organisational structures	0.86	0.84	0.9	Excellent
Housing co-operatives should network with other stakeholders such as the apex body of co-operatives and NGOs for their development	0.86	0.84		
Exhibition of high level of commitment by all stakeholders involved in co-operative housing	0.63	0.93		
Regular training and education of members by housing co-operatives	0.79	0.87		

ITC-Item total correlation; AID-Alpha if deleted and CA-Cronbach's alpha
Source: Field survey, 2012

In this article, the closer the Cronbach's alpha coefficient is to 1, the greater the level of correlation. The above table shows that all the variables within each group are highly correlated due to the high value of Cronbach's alpha obtained.

4.1 Proposed Framework

Based on the Cronbach's alpha reliability coefficient tests conducted as shown in Table 1.0, the proposed framework in Figure 1.0 was developed. The essence of the framework is to advance the roles expected from the role players and the relationship among the role players in achieving sustainable housing co-operatives based on the strategies identified. The framework is about who does what, where and the output expected from those actions. The strategies are interrelated as shown by the linking arrows; without an enabling policy and legislative framework for instance, it will be difficult for the support services to be successful. The same interrelationship is also displayed among the outputs as shown in Figure 1 below.

4.2 Components of the Framework

The following four (4) factors based on the Cronbach's alpha reliability coefficient tests constitute the components of the proposed framework. In the figure above, DHS represents Department of Human Settlements; HDA represents Housing Development Agency; NHFC represents National Housing Finance Corporation; NURCHA represents National Urban Reconstruction and Housing Agency; SAHCA represents South African Housing Co-operatives Association; SEDA represents Small Enterprises Development Agency and SHRA represents Social Housing Regulatory Authority.

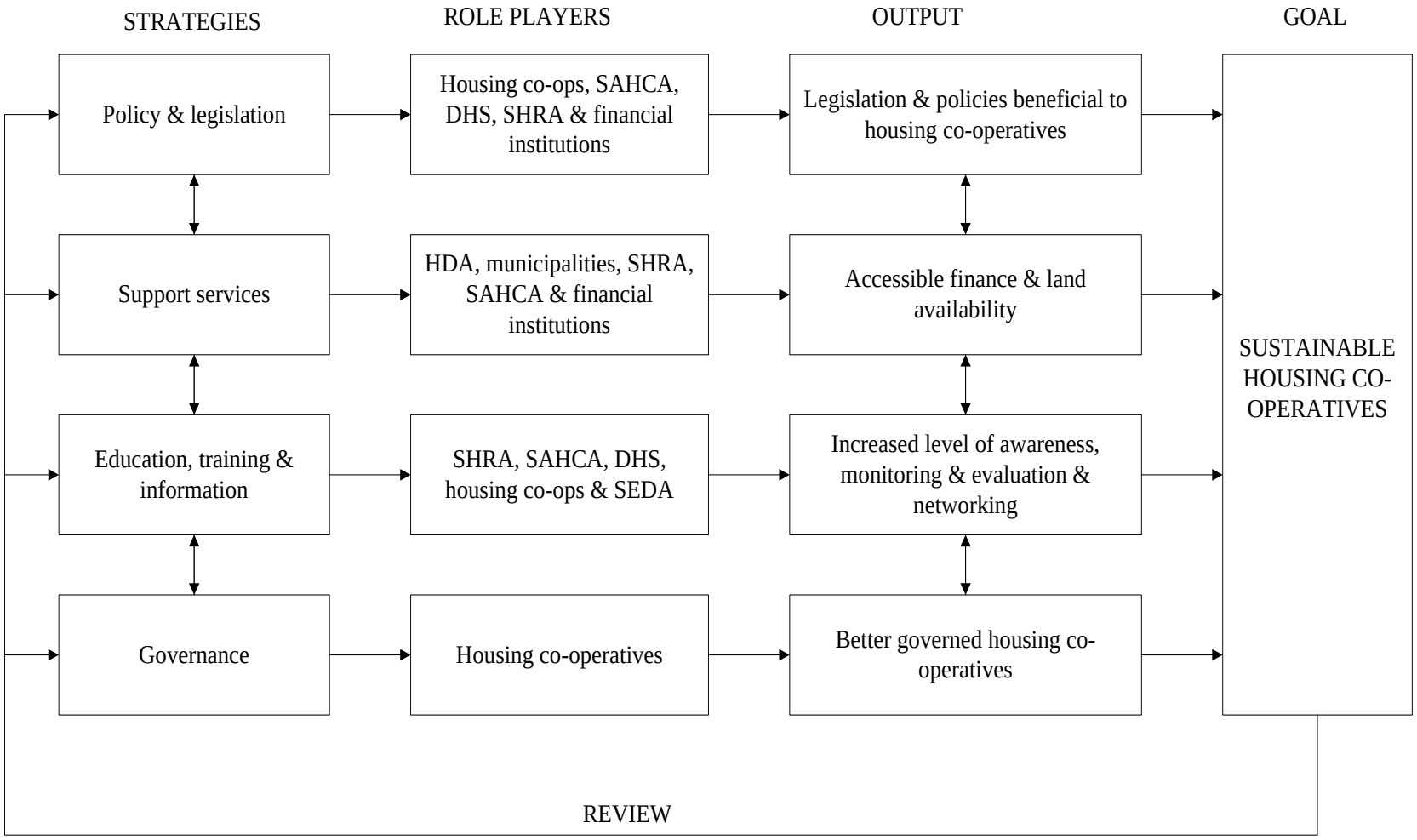

Figure 1: Components of strategy implementation process

4.3 Policy and Legislation

The lack of legislative framework for co-operative housing, according to the Mayor of London (2004), has created difficulties for the establishment and administration of housing co-operatives in the UK. The situation in South Africa for the low number of housing co-operatives may be because the environment is not suited to the co-operative housing approach (Rust, 2001). According to UN-Habitat (2006a), the environment where housing co-operatives operate must be conducive for housing co-operatives to be successful. This can be achieved when there is a positive policy climate at the national level that accepts the efforts of housing co-operatives in mobilising resources for housing delivery. To implement this, as stated by UN-Habitat (2006a), there is the need for appropriate legislation and other enabling instruments. Eglin (2008) observes that housing co-operatives are not treated as non- profit organisation based on the Non-Profit Organisation Act 71 of 1997. To this end, housing co-operatives does not qualify for tax exemption because co-operatives are classified as enterprises that should be making profit.

Before coming up with the 1994 White Paper on Housing, a wide spectrum of bodies and people were consulted. In the same vein, for legislation and policies that are beneficial to all the housing co-operatives in South Africa, bodies such SAHCA, housing co-operatives, all the spheres of Department of Human Settlements (National, Provincial and Municipal), SHRA and financial institutions have to come together in a forum to forge a common front. This will bring about a robust debate that is all inclusive, leading to the general acceptability of the end product which may be in the form of a policy or legislation.

4.4 Support Services

According to UN-Habitat (2006a), support services should be in the areas of land acquisition and sourcing and provision of finance among other services. The approach adopted by countries such as Egypt, Czechs Republic and Portugal on the issues of land and finances to housing co-operatives, is worth emulating in South Africa. For example, in Egypt, housing co-operatives are exempted from many taxes and fees such as stamp tax paid on contracts and fees levied by municipalities; housing co-operatives receive a 25% discount on all State-owned land, which sometimes is increased to 50% by the Minister of Finance (ICA, 2010). In Czechs Republic, tax relief for interest on mortgage loans is granted and direct financial support for housing construction is given (ICAb, s.a). In Portugal, incentives such as reduced value added tax (VAT), tax exemption on land acquisition and subsidised interest rates on loans are given to the housing co-operatives (ICAe, s.a).

Closer home, in Zimbabwe, according to Mubvami and Kamete (2001), housing co-operatives are able to access land ahead of others and that some municipalities give free land as an incentive to housing co-operatives to encourage them. The missing link here is that once the government in power is no longer there and the next one is not sympathetic to the same cause, the incentive may be stymied. Hence, to prevent this happening, it has to be backed by appropriate legislation. Similarly, the Government of India gives concessions to the housing co-operatives in areas such as land allocation and credit due to the acknowledged role played by the housing co-operatives in meeting the housing needs of the urban poor (UN-Habitat, 2011a).

Based on the above, there is the need for close collaboration among the Housing Development Agency (HDA) (whose objective is to release land for residential purposes), municipalities, SHRA and SAHCA to have a workable plan that will be beneficial to the housing co-operatives on land acquisition. In a related development, financial institutions such as banks, the National Urban Reconstruction and Housing Agency (NURCHA) and the NHFC should also collaborate with SHRA and SAHCA to come up with financial instruments that housing co-operatives will be able to relate to with regards to making finance available and affordable.

UN-Habitat (2011b) states that the housing finance sector exists within the larger macroeconomic framework that is subjected to market forces and that there is the need for policy makers to have a better understanding of these forces in order to have a vibrant housing finance sector. Hence, to make the housing finance sector to be virile, UN-Habitat (2011b) advocates the following measures that the government can put in place to support lending:

- Getting the macroeconomic environment right;
- Getting the housing supply picture right;
- Encouraging the existing lenders to extend their mortgage loans downmarket by subsidising the elements that usually impede participation such as the high administration costs involved when working with low income people;
- Promotion of alternative forms of housing finance such as community-based self-finance, housing microfinance and other non-mortgage products; and
- Collecting, analysing and distributing data about the housing needs and affordability variables of people within the country.

4.5 Education, Training and Information

In the absence of education, training opportunities and information, according to the Mayor of London (2004), the public is prevented from looking at the potentials that the co-operative housing approach has in meeting their housing needs. On the part of the housing co-operatives, when there is poor quality induction, education and training sessions for the members, as stated by the Mayor of London (2004), the resultant effect will be a lack of understanding on what constitutes co-operatives, the functions, the responsibility and obligations of the members thereby creating a shaky co-operative's ideology. Rodgers (1999) opines that keeping members informed is sine qua non to getting the members involved.

Rust (2001) states that education in housing co-operatives can take any of the forms highlighted below:

- Creating awareness of the co-operative housing approach;
- Creating processes that enable role players to become advocates of the co-operative housing approach in the work they do; and
- Setting Key Performance Indicators (KPIs) so that the progress of the subsector can be monitored.

Therefore, it behoves on SHRA, SAHCA, SEDA, all the spheres of Department of Human Settlements (municipal, provincial and national) and the housing co-operatives to be the driver of this component of the proposed framework.

4.6 Governance

The Co-operative Housing Federation (CHF, 2009) states that governance has to do with the way in which a housing co-operative is positioned in terms of policy setting, adopting budgets, supervising management and making sure that the housing co-operative is able to meet the needs of the members. Governance, according to CHF (2009), is the job of the Board and the members who elect the Board. Governance, as stated by CHF (2010) is usually propelled by the following:

- An explicit understanding of what Board members are expected to do;
- The expertise to carry it out; and
- The values that put the interests of the housing co-operative and the members above other interests.

The Mayor of London (2004) indicates that the inability of housing co-operatives to distinguish between control and management sometimes results in failure. To this end, the Mayor of London (2004) and the CHF (2010) are of the opinion that employing staff or involving management companies is better most of the time rather than having voluntary self-management. According to the CHF (2009), being housing co-operative is not predicated on the person in-charge of management. The CHF (2009) indicates that some housing co-operatives have benefitted from the use of committees, while others have not especially in areas such as finance, maintenance and members turnover. In all, there is no rule of thumb, it boils down to what works best but however, forming committees should be predicated on the following questions as stated by CHF (2009):

- Do committees get the job done well every time?
- Do committees get the work done when it needs doing?

According to the CHF (2009), if the response to the above questions is not positive all the time, relying on committees to run the housing co-operative will have to be re-examined. The CHF (2010a) advocates that committees need not be a permanent idea in the housing co-operatives governance structures because what is important is the outcome and not the structure. Members are expected to support good governance in their various housing co-operatives, without supporting good governance, sustainable housing co-operatives will be a mirage. The CHF (2010) highlights the following requirements for members' participation to support good governance apart from their legal requirements:

- Understanding the meaning of good governance;
- Learning about the values and principles of co-operatives;
- Actively participating in members' meetings;
- Applying the principles of good governance in any committee work they may be doing;
- Electing Board that will put the needs of the members ahead of other needs; and
- Supporting education and training opportunities for the members.

In a nutshell, housing co-operatives can only become sustainable when the right people are elected to govern and the members support the elected members or when a management is appointed for this purpose.

5. CONCLUSION

The roles of the various governments have been the driving force of the housing co-operatives in those countries where housing co-operatives have been successful due to the tremendous support received by the housing co-operatives. The implication is that the housing co-operatives in any country cannot do it alone without the support of government in areas such as having legislation and policies that are beneficial to the housing co-operatives, providing support services in areas such as land allocation and favourable finance and embarking on regular education and training. While the roles of government are incontrovertible, members are expected to display a high level of commitment in terms of regular payments of fees and ensuring that they participate adequately in the activities of their housing co-operatives. Above all, governance in the housing co-operatives should be dynamic; to this extent, it should always be what works best in a given situation and this implies being flexible so that the housing co-operative could be open to new ideas that will be beneficial. In a nutshell, the framework proposed clearly shows that for housing co-operatives to become sustainable, all the role players must come on board and collectively do what is expected of each role player.

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ANALYSIS OF CONSTRUCTION-RELATED FACTORS AFFECTING THE EFFICIENCY OF CONSTRUCTION LABOUR

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ABSTRACT

Irrespective of significant relevance of construction industry to economic growth of developed and developing nations, labour efficiency in the construction industry remains relatively low and thus affects construction project delivery and client's satisfaction. This paper aims at exploring adverse construction related factors contributing to the shortfall of construction labour efficiency in the South African construction industry. The study adopts mixed methodological approach, administering closed ended questionnaires to construction professionals on Western Cape and Gauteng construction sites, while experienced construction site supervisors were interviewed to validate quantitative data obtained. Statistical Package for Social Sciences (Version 22) and content analysis were used respectively to analyse data obtained. Communication ability of site managers, construction skills of site supervisors and effective site planning ability of contractors were found as the predominant construction related factors affecting the efficiency of construction labour. This study is restricted to contractors, site supervisors and site managers' related factors affecting the efficiency of construction labour. Adequate application of findings presented in this study will significantly reduce the current prevalent construction time and cost overruns through an improved construction workforce performance. Enhanced construction productivity is a product of construction labour efficiency that ensures achievement of construction project objectives and heightens contribution to South African economic development.

Keywords: Construction productivity, Construction team, Economic development, Labour efficiency, Project objectives.

1. INTRODUCTION

The cost of employing construction workers on different construction projects varies widely: labour costs on large construction projects typically account for approximately 40% of direct capital cost (Kazaz, Manisali & Ulubeyli, 2008).

Regardless of this significant percentage of labour cost, the construction industry is generally characterised by poor productivity of construction labour.

However, "human resource of an organisation represents the most variable, uncontrollable, and important element of production".

This is an indication that employees in an organisation merit a higher level of concern, most essentially in relation to labour-intensive sectors like the construction industry. Employees are characterised as the most challenging resource for an organisation to manage. As a result, construction management is meant to be strategically used to improve the efficiency of construction employees and enhance overall construction performance during building production processes. The fragmented structure, itinerary nature, and challenging working environments of construction employees are arguably contributing factors to the comparative inefficiencies of the construction workforce. Nonetheless, considering the relevance of employees to organisational development, there is a need to devise an effective management system that can afford utilisation of the construction industry's human assets to improve performance on construction projects. Olomolaiye and Egbu (2004) support the notion that effective management of the construction workforce will enhance construction project performance. Therefore, construction workers' performance improvement, as an essential tool for improving construction project performance, requires industrial and academic interventions in the construction sector. The objective of this study is to explore construction related factors that adversely affect construction workers efficiencies and subsequently rank the factors to prioritize the severity of the factors.

2. CONSTRUCTION RELATED FACTORS AND CONSTRUCTION WORKERS EFFICIENCY

2.1 Impact of contractors on construction workers performance

The term "contractor" implies from a legal agreement or contract negotiated and executed between the client and the builder (Knutson et al., 2009). Contractors have significant roles to play in construction worker management aimed at enhancing overall construction productivity. Delay and loss of construction productivity may occur as a result of a contractor's inability to effectively utilise construction human capital (Haseeb, Lu, Bibi, Dyian & Rabbani, 2011). Unarguably, construction contractors are generally involved in most successful construction projects. Contractor organisations are generally one of the major parties in the construction production process that is majorly involved in planning stage. According to Harris and McCaffer (2001), a well-planned, effectively monitored and controlled project results in successful delivery of any contract and determines the contractor's profit. Therefore, the selection of construction contractors constitutes a major decision for clients and the professionals engaged by them (Palaneeswaran & Kumaraswamy, 2001). Considering only the construction cost can negatively affect the quality of construction during the production process. Wong (2004) suggested that contractor selection efforts should weed out incapable contractors at an early stage to prevent poor project performance. In the construction environment, contractors are responsible for developing strategies for successful construction projects, including planning for a sufficient and capable construction workforce, materials, machinery and sub-contractors (Mincks & Johnston, 2011).

According to Baloyi and Bekker (2011), contractor-specific factors responsible for cost and time overruns are; shortage of skill workers, poor resources and time planning, actions of sub-contractors, site management and poor labour productivity.

Assaf and Al-Hejji (2006) further opine that lack of effective planning and scheduling, shortage of a capable and sufficiently large construction workforce and difficulties in financing by contractors are the common causes of delay in construction projects. Under a single system of contract, construction clients award the execution of the entire project to a single prime or general contractor.

General contractors bring together different elements and inputs under a single and coordinated system for project execution, in compliance with contract documents. In this system of contract, the contractor is completely responsible to the client. However, in a separate system of contract, several independent contractors work on the project without recourse to a single coordinated system. Each prime contractor is responsible for the allocated section of work, and directly responsible to the client (Sears et al., 2008). During construction project execution, the contractor plans and directs the workforce and other construction resources required for the project. Therefore, the contractor is directly responsible for monitoring progress and proactively planning for the present and future of construction operations (Harris & McCaffer, 2001). General contractors employ speciality contractors or sub-contractors to accomplish specific sections of each construction phase, such as: plumbing, electrical work, earthmoving etc. Knutson et al. (2009) state that speciality contractors on a project can number more than twenty and consequently represent the largest portion of workers on construction projects. A speciality contractor employed by the client to carry out a project may employ a general contractor who executes some portions of the project. The specialty contractor becomes the general contractor while the general contractor becomes the sub-contractor on the particular project (Nunnally, 2011). Hence, in this contractual system, the speciality contractor is responsible to the client for project completion within the specified time, budgeted cost and expected quality. Considering the impact of sub-contracted work on construction workforce productivity, Egbu, Ellis and Gorse, (2004) stress that contractors only have a direct influence over labour directly employed by each contractor, and indirectly control the workforce employed by sub-contractors. The construction contractor can make a substantial effort to afford favourable working conditions for the sub-contractor. However, the contractor's effort may not improve construction productivity unless the sub-contractor's own management themselves makes supportive efforts (Egbu et al., 2004).

2.2 Site manager's impact on the efficiency of construction workers

Building and civil engineering projects are complex, both in design and production processes (Shohet & Frydman, 2003). Therefore, the effectiveness of construction organisations is determined by the ability of site managers to manage this complexity and effectively control the construction work team (Egbu et al., 2004). Turner and Muller (2004) note that communication contributes to trust building on a construction project, and ineffective communication can result in a breakdown of trust. Unarguably, the construction site manager plays an important role in successful delivery of construction projects. Styhre and Josephson (2006) note that the success of a construction project significantly depends on the site manager, and the responsibility of the construction site manager extends beyond technical and production-oriented matters. Therefore, the site manager is required to be versatile in to afford attainment of project objectives.

Fraser (2000) suggested that construction organisations should consider training and professional development of site managers for performance improvement.

Consequently, due to the wide range of responsibilities of the construction site manager, production responsibility on site is becoming largely delegated to site supervisors, while construction site managers become more dedicated to construction planning, co-ordination, procurement activities, documentation and reporting (Styhle, 2006). Similarly, Egbu et al. (2004) maintain that planning, co-ordination and procurement ensures co-ordination of labour inputs, control of construction resources (materials, and plants) and ensures general efficiency of construction operations. Traditionally, the successful delivery of a construction project hinges on the performance of the project manager, who must consider delivery time, budgeted cost and expected quality (Pheng & Chuan, 2005).

Further, Walker (2007) claims that the title "project manager" contains a reserved implication, as, in construction, being a project manager implies managing the entire construction process. Considering the relevance of project managers in the construction process, they require good construction skills and capabilities in order to effectively fulfil their function. However, project manager with such abilities are rare (Zavadskas, Turskis, Tamosaitiene & Marina, 2008). A significant challenge confronting construction site managers is the difficulty of ascertaining the needs of construction project stakeholders, comparing those needs with the project objectives and deciding on the best strategy to fulfil those needs and objectives (Olander, 2007). Although the construction project manager's principal responsibility is to achieve project objectives in a particular contract, the objectives of construction projects are rarely accomplished as expected. Consequently, Pheng and Chuan (2005) argue that the causes of underperformance of a construction project manager is not restricted to inadequate skill on their part alone, but that a poor working environment can negatively impact the efficiency of a contractor's project manager. The actions of the construction client can also influence the performance of the client's project manager. Soham and Rajiv (2013) point out that the construction industry faces labour productivity challenges. The opinion is advanced by Levy (2008) that the efficiency of the construction workforce is a product of the scarcity of skilled workers and inadequate technical know-how on the part of construction managers. With the exception of design errors, most of the significant factors affecting construction workforce efficiency can be controlled by the day-to-day actions of the project manager and site supervisors (Dai et al., 2009). Hence, project managers are responsible for construction success and project quality, completion within specified cost and completion with the specified time (Sears et al., 2008). Pheng and Chuan (2006) opine that successful delivery of construction projects greatly depends on the project team members' ability to efficiently work together, since effective construction planning significantly reduces construction progress interruption (Ameh & Osegbo, 2011).

Project managers of construction firms are not only required to concentrate on building technologies and management of material resources, but also must pay significant attention to the construction workforce itself, an entity whose behaviour cannot be easily predicted (Lill 2008). With regard to the achievement of improved worker efficiency, Kazaz et al. (2008) opined that the qualifications held by construction managers, as well as the experience of site supervisors , are important elements that determine the level of construction labour efficiency. Lill (2008) further argues for the necessity of creating a balance between construction project requirements and the needs of workers in the construction industry.

Fapohunda and Stephenson (2010) note the need for training and personal development of construction managers, especially on new technologies that could improve effective and efficient utilisation of construction resources.

Jarkas and Bitar (2012) suggest that a high level of technical skill and extensive knowledge of contractual arrangement on behalf of the construction manager are important factors if the construction manager is to anticipate future hazards and avoid missing important construction details. Therefore, successful delivery of construction projects is significantly dependent on the competence of project manager's skills and ability (Zavadskas, et al., 2008).

2.3 Site supervisors and construction workers productivity

In the construction context, the terms "site supervisors" and "foremen" are used interchangeably. Usage depends on the individual construction firm (Dingsdag, Biggs and Sheahan, 2008). The site supervisor represents the link between management and construction labour (Serpell & Ferrada, 2007; Uwakweh, 2005).

In other words, construction site supervisors are directly responsible for directing the activities of labours on the construction site. This makes the supervisors' impact on workers' productivity significant (Uwakweh, 2005). Similarly, Serpell and Ferrada (2007) report that "Construction site supervisors direct the execution of basic construction work operations, as well as communicating project objectives and goals to workers". Therefore, the construction site supervisor becomes the most active leader on site and is generally perceived by workers as "the most visible people on site" (Dingsdag et al., 2008). However, from the standpoint of communication, Serpell and Ferrada (2007:588) posit that communication management on building construction sites is relatively poor. However, Kines, Andersen, Spangenberg, Mikkelsen, Dyreborg and Zohar (2010) contend that there is regular communication between supervisors and workers, although there is a need to improve on the effectiveness of the message. Achievement of construction project objectives and general performance of construction crafts is the responsibility of the construction site supervisor, which is termed "labour critical function" (Serpell & Ferrada, 2007). Hence, the site supervisor's adoption of an appropriate channel of communication is a significant tool for effective labour performance. Kines et al. (2010) note that the attitude of site supervisors to construction safety significantly influences the safety behaviour of junior construction workers. Serpell and Ferrada, (2007) summarise the primary site supervisor-related challenges confronting construction performance as follows:

- Lack of formal training to ensure site supervisors' efficiency in supervisory responsibilities.
- Deficiency in site supervisor training results in increase in cost of construction, due to poor work planning and inefficiency in communication with subordinates.
- Insufficient formal training programmes that could afford the construction industry the required number of qualified site supervisors.
- Inappropriate selection processes adopt by supervisory personnel.

3. RESEARCH METHOD

The study identified eleven contractor's-related factors, ten trade supervisor's-related factors and nine factors that are related to construction site managers.

Due to vast growth of construction activities in Gauteng and Western Cape provinces in South Africa, the study was undertaken in the two provinces. Data collected in each province were separately analysed and the factors in both provinces were compared.

Subsequently, data obtained from both provinces were combined for analysis to identify the factors efficiency relationship in the provinces. The research adopts convenient and purposive sampling techniques. Considering that the complex nature of construction operations leads to busy schedules of project participants, questionnaires were administered to construction professionals in Gauteng and Western Cape provinces base on accessibility to construction sites and availability of construction professionals on sites. Strung and Stead (2007) expressed convenient sampling as a sampling technique adopted on the basis of availability and accessibility of respondents. However, construction site supervisors interviewed were purposively selected on the basis of the direct working relationship between site supervisors and construction labour. For the purpose of the interview, three construction sites were selected with two participants' site supervisors on each construction sites. The participants' site supervisors were experienced in construction operations, with adequate years of supervisory responsibilities in the construction sector. The experience of the site supervisors is arguably a helpful instrument to assess the validity of data obtained from construction professionals. The research questionnaire design adopts structured questions utilising a five-point scale.

The closed-ended questions provide factors affecting construction workforce efficiency, as explored from the review of literature produced by previous research and exploratory studies conducted at the early stage of the study. Majority of the questionnaires were hand-delivered to respondents and the remainder were administered through electronic mail. Sixty-two (25.3 %) questionnaires were retrieved and analysed with Statistical Package for the Social Sciences (SPSS) version 22. The underlying purpose for selecting construction professionals (architects, quantity surveyors, site engineers, project managers, contract managers and site managers) as participants for the quantitative part of the study relies on the extensive experience of professionals concerning factors affecting the delivery of construction projects while that of site supervisors is based on their working relationship with construction labour. Quantitative data obtained from the structured questionnaire design was analysed with descriptive statistics, while qualitative data gathered from interviewees was analysed with qualitative content analysis. The underlying purpose is to validate quantitative data and ensure reliability of research findings while validity of the result was achieved through testing of quantitative data obtained from construction professionals, with qualitative interviews conducted with construction site supervisors. Reliability was ensured by testing scaled research questions with Cronbach's alpha coefficient in SPSS (Version 22) software. Majority of the study respondents (87.1%) work with contractor's firm, 3.2 % work with architectural firm, 8.1 % with project management firm and 1.6 % work with quantity surveying consultant firm. The study respondents are male dominant with 82.3 % male and 17.7 % female. 21 % of survey participants are below 26 years of age, 50 % are between 26 and 35 years while 29 % are 36 years and older. 48.8 % respondents have one to five years' work experience in the construction industry, 22.6 % have six to ten years construction work experience and 30.6 % respondents have eleven to forty years' experience. 6.5 % respondents are architect, 12.9 % are quantity surveyors, 17.7 % are site managers, 21 % are project managers, 11.3 % are contract manager and 30.6 % are site managers. Majority of the respondents (72.6 %) have been working in this position between one to five years while 27.4 % between six to forty years.

Table 1: Reliability of research instrument

	Number of items	Cronbach's alpha coefficient values
Contractors factors	11	0.78
Site supervisors factors	10	0.86
Site managers factors	9	0.89

The scaled questions used in the study were tested by Cronbach's alpha coefficient using Statistical Package for Social Sciences software (version 22) to ensure the reliability of research questions. Table 1 presents the summary of reliability tests conducted on scale questions. The results of the Cronbach's alpha co-efficient tests are found satisfactory in term of the requirements of reliability test.

4. RESULTS AND DISCUSSION

Table two presents the findings of factors affecting construction labour efficiency in Western Cape Province and Gauteng province as separately analysed. Supervision delay by trade supervisors emerges the most severe factor affecting the efficiency of construction workforce in Western Cape Province with a mean value of 4.80 (Table 2). Serpell and Ferrada, (2007) supported that training of site supervisor's will improve supervisors supervisory responsibilities on construction sites.

Site planning ability, rework due to construction error, inadequate co-ordinating ability of workforce and site manager's coordinating skills have the same level of adverse impact on construction workforce efficiency in Gauteng province with the mean value of 4.47. However, Fraser (2000) noted that construction organizations should consider training and professional development of construction site managers for performance improvement. The most severe factor affecting the performance of construction workers in Western Cape Province differs from the top four factors with the same adverse impact in Gauteng province (table 2). Communication ability of site manager, level of literacy of site managers and site manager's co-ordinating skill are identified in Western Cape as the second, third and fourth factors affecting construction workforce efficiency respectively. This indicates significant contribution of construction managers to poor performance of construction workers in the Western Cape Province. However, rework due to unclear instructions from supervisor, planning ability of site managers and communication ability of site managers are rated as the fifth factors with the mean value of 4.41 in Gauteng province.

Kines et al., (2010) contended that there is a regular communication between supervisors and workers on construction projects. Nonetheless, communication barrier between supervisors and construction labour, planning ability of site manager, and construction skill of trade supervisors have the same impact on construction workers efficiency in Western Cape Province with the mean value of (4.31). Serpell and Ferrada, (2007) noted the significance of construction site supervisors as being responsible for directing the execution of basic construction work operations, and communicating project objectives and goals to construction workers. Kines et al., (2010) emphasized the need to improve the effectiveness of site communication.

Table 2: Construction-related factors affecting construction workers efficiency Western Cape Province against Gauteng Province

WESTERNN CAPE CONSTRUCTION SITES			GAUTENG CONSTRCUTION SITES		
Factors	**Mean**	**Rank**	**Factors**	**Mean**	**Rank**
Supervision delay by trade supervisors	4.80	1	Supervision delay by trade supervisors	4.18	12
Communication ability of site managers	4.47	2	Communication ability of site managers	4.41	5
Level of education of site managers	4.40	3	Level of education of site managers	4.18	12
Site manager's coordinating skill	4.36	4	Site manager's coordinating skill	4.47	1
Communication between supervisors and construction labour	4.31	5	Communication between supervisors and construction labour	4.18	12
Planning ability of site managers	4.31	5	Planning ability of site managers	4.41	5
Construction skill of supervisors	4.31	5	Construction skill of supervisors	4.29	10
Technical skill of site managers	4.27	8	Technical skill of site managers	4.06	21
Decisions of site managers	4.27	8	Decisions of site managers	4.35	8
Inadequate instructions from supervisors to labourers	4.27	8	Inadequate instructions from supervisors to labourers	4.18	12
Poor coordination of workers by supervisors	4.22	11	Poor coordination of workers by supervisors	4.12	17
Recruitment of competent supervisors	4.22	11	Recruitment of competent supervisors	4.18	12
Site managers relationship with project team	4.22	11	Site managers relationship with project team	4.00	22
Contractors construction experience	4.22	11	Contractors construction experience	4.35	8
Relationship between supervisors of different trades on site	4.20	15	Relationship between supervisors of different trades on site	3.94	25
Administrative experience of site managers	4.18	16	Administrative experience of site managers	4.12	17
Inadequate instructions of site managers	4.18	16	Inadequate instructions of site managers	4.29	10
Effective site planning ability	4.18	16	Effective site planning ability	4.47	1
Relationship with sub-contractors	4.16	19	Relationship with sub-contractors	4.00	22
Inadequate co-ordinating ability of workforce	4.13	20	Inadequate co-ordinating ability of workforce	4.47	1
Rework due to construction error	4.07	21	Rework due to construction error	4.47	1
Trade supervisors absenteeism	4.07	21	Trade supervisors absenteeism	4.12	17
Method of construction	4.02	23	Method of construction	3.94	25
Contractors delay of instruction to employee	3.98	24	Contractors delay of instruction to employee	4.00	22
Rework due to unclear instruction from supervisor	3.96	25	Rework due to unclear instruction from supervisor	4.41	5
Inadequate facilities for construction workers	3.87	26	Inadequate facilities for construction workers	3.82	27
Access to construction sites	3.82	27	Access to construction sites	3.29	29
Poor relationship of supervisor with employer	3.82	27	Poor relationship of supervisor with employer	4.12	17
Contractor financial problems	3.80	29	Contractor financial problems	3.59	28
Profit intention of contractors	3.76	30	Profit intention of contractors	3.29	29

Contractor construction experience and decision of site manager are ranked the eight factors with the same level of impact in Gauteng province, while the factors are ranked the eleventh and eighth factors in Western Cape Province respectively.

The latter factor has the same impact on the efficiency of workers in the two provinces. Inadequate instructions from trade supervisors to laborers and technical skill of site managers are both ranked eighth in Western Cape Province. However, inadequate instructions from trade supervisors to laborers is ranked twelfth and technical skill of site managers have a low effect (ranked twenty one) in Gauteng province.

Considering the least factors with minimal impact on the performance of construction workers in the two provinces, profit intention of contractors is perceived by respondents as the least factor that affects the performance of construction employee in the Western Cape Province. Contractor profit intention and assess to construction sites are the two least factors affecting labour efficiency in Gauteng province. Hence, profit intention of contractors has the least effect on construction labour performance in Western Cape and Gauteng construction firms. Contractor's financial problem is ranked twenty-ninth in Western Cape Province. Comparatively, contractor financial problem with a mean value of (3.59) is ranked the twenty-eighth factor in Gauteng province. From the table two above, it is apparent that the most severe factors affecting the performance of construction labour on Western Cape construction sites are significantly different from the most severe factors on Gauteng construction sites. The analysis of the combined data obtained from the two Provinces is presented in Tables 3, 4 and 5.

Table 3: Contractor-related factors

Factors	N	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)	Mean value	S.D	Rank
Effective site planning ability	62	0	1.6	11.3	46.8	40.3	4.26	0.71	1
Contractor's construction experience	62	0	3.2	12.9	38.7	45.2	4.26	0.81	2
Inadequate co-ordinating ability of workforce	62	0	4.8	8.1	46.8	40.3	4.23	0.80	3
Rework due to construction error	62	1.6	4.8	17.7	25.8	50.0	4.18	1.00	4
Relationship with sub-contractors	62	0	3.2	19.4	40.3	37.1	4.11	0.83	5
Method of construction	62	0	3.2	25.8	38.7	32.3	4.00	0.85	6
Contractors delay of instruction to employee	62	0	8.1	22.6	32.3	37.1	3.98	0.97	7
Inadequate facilities for construction workers	62	1.6	12.9	19.4	30.6	35.5	3.85	1.10	8
Contractor financial problems	62	4.8	3.2	33.9	29.0	29.0	3.74	1.01	9
Access to construction sites	62	8.1	6.5	17.7	45.2	22.6	3.68	1.14	10
Profit intention of contractors	62	6.5	4.8	27.4	41.9	19.4	3.63	1.01	11

The study reveals effective site planning ability of construction contractors as being a notable concern with regard the efficiency of construction labour (Table 4.5). The capability and effectiveness of the contractor when planning construction operations will unarguably facilitate construction operations and prevent unnecessary delay of construction activities during production processes on construction sites.

Harris and McCaffer (2001) posit that, a well-planned, effectively monitored and adequately controlled project ensures construction delivery efficiency and determines contractor's profit.

Assaf and Al-Hejji (2006:351) further support the notion that lack of effective contractor planning and scheduling are contributory factors to delays in construction projects. As presented in Table 4.5, the experience of the contractor is a significant factor, having the same mean value (4.26) as the site planning ability of contractors. Site planning ability, however, is considered more significant, because response tends to be more concentrated on site planning ability (S.D=0.71) than contractor construction experience (S.D=0.81). In an effort to prevent poor project performance, Wong (2004) contends that the contractor selection process should identify incapable contractors at an early stage and disqualify incompetent contractors in order to ensure that only qualified contractors tender for construction projects.

Also, inadequate coordination of the workforce is indicated as a significant factor contributing to poor performance of the construction workforce (Table 4.5). Rework due to construction error is also identified as a factor affecting construction labour efficiency. The review of literature reveals that inability of contractors to effectively utilise human resources in construction may result in delays and loss of construction productivity (Haseeb, et al., 2011). Further, Table 4.5 indicates the relationship of contractors with sub-contractors as a challenge to the efficiency of construction workforce. Egbu et al., (2004) posit that the contractor's efforts to improve worker efficiency should be supported by sub-contractors' management personnel.

Table 4: Site supervisors-related factors

Factors	N	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)	Mean value	S.D	Rank
Construction skills of supervisor	62	0	4.8	4.8	45.2	45.2	4.31	0.78	1
Communication between supervisors and construction labour	62	0	0	19.3	33.9	46.8	4.27	0.77	2
Inadequate instructions from supervisors to labourers	62	0	3.2	14.5	37.1	45.2	4.24	0.82	3
Recruitment of competent supervisors	62	0	3.2	12.9	43.6	40.3	4.21	0.79	4
Poor coordination of workers by supervisors	62	0	0	17.7	45.2	37.1	4.19	0.72	5
Relationship between supervisors of different trades	62	0	3.2	17.7	41.9	37.2	4.13	0.82	6
Trade supervisors' absenteeism	62	1.6	4.8	19.4	32.3	41.9	4.08	0.9	7
Rework due to unclear instruction from supervisor	62	3.2	8.1	8.1	38.7	41.9	4.08	1.06	8
Supervision delay by trade supervisors	62	0	1.6	19.4	56.5	22.6	4.00	0.9	9
Poor relationship of supervisor with employer	62	1.6	4.8	22.6	43.5	27.5	3.9	0.9	10

The construction skill of site supervisors is considered a paramount tool for improving the efficiency of construction labour (Table 4.6). The study undertaken by Olomolaiye et al. (1987), Kaming et al. (1997), Jarkas and Bitar (2012) found supervision delays to significantly contribute to construction labour efficiency challenges. Serpell and Ferrada (2007); Uwakweh (2005) report that construction site supervisors are the link between managers and construction labour, and

adequate levels of skill (construction and supervisory) are required by construction site supervisors.

Communication between supervisors and construction labour is a significant factor in improving the efficiency of labour in the South African construction sector (Table 4.6). Despite the relevance of effective communication on construction sites, Serpell and Ferrada (2007) posit that communication management on construction sites is significantly poor. Conversely, Kines et al. (2010) contend that there is regular communication between site supervisors and construction labour, but there is a need to improve on the effectiveness of the message. Kine et al. (2010) further stress that inadequate instructions from supervisors to labour constitute one of the major challenges to construction workers' efficiency. Findings reveal that there is a need to involve competent supervisors in construction process (Table 4.6 & 4.22), since construction site supervisors are the most noticeable people on sites and direct the execution of basic construction operations, as indicated in the literature. Poor coordination of workers by supervisors, as indicated in Table 4.6, is an important factor affecting the efficiency of construction labour.

Improved coordination of construction labour can be attained by providing site supervisors with adequate construction and managerial skills in supervisory work and also augmenting the skills of the available supervisors. Difficulty in the recruitment of skilled construction supervisors has a considerable impact on the efficiency of construction operations (Lim & Alum, 1995; Enshassi et al., 2009). Construction site supervisor absenteeism is identified by Lim and Alum (1995); Kaming et al. (1997), and Makulsawatudom, et al. (2004) as a contributory factor to poor labour efficiency in the construction industry. This study, however found that this factor was regarded as one of the least significant site supervisor-related factors affecting the performance of construction labour.

Table 5: Site manager-related factors

Factors	N	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)	Mean value	S.D	Rank
Communication ability of site managers	62	0	1.6	3.2	43.5	51.6	4.45	0.64	1
Site manager's coordinating skill	62	0	1.6	11.3	33.9	53.2	4.39	0.75	2
Planning ability of site managers	62	0	1.6	6.5	48.4	43.5	4.34	0.67	3
Level of education of site managers	62	0	1.6	6.5	51.6	40.3	4.34	0.67	3
Decisions of site managers	62	1.6	0	6.5	51.6	40.3	4.29	0.73	5
Inadequate instructions of site managers	62	0	4.8	4.8	54.8	35.5	4.21	0.75	6
Technical skill of site managers	62	1.6	1.6	11.3	45.2	40.3	4.21	0.83	6
Site manager's relationship with project team	62	0	1.6	19.4	40.3	38.7	4.16	0.79	8
Administrative experience of site managers	62	0	1.6	6.5	48.4	43.5	4.16	0.79	8

Findings reveal the communication ability of site managers to be an important factor in the efficiency of construction labour (Table 4.7 & 4.22).

Turner and Muller (2004) note that communication contributes to trust building on construction projects and ineffective communication can result in breakdown in trust. The ability of site managers to communicate project objectives to project teams is significant to the performance of construction projects.

Also, coordination of construction teams by site managers, as indicated in Table 4.7, is important to efficient labour performance (Table 4.22). Fraser (2000) suggests that construction organisations should consider training and professional development of site managers for performance improvement. Further, the planning ability of site managers was found to be an essential factor for improving the efficiency of construction workers (Table 4.7). Adequate planning and co-ordination ensures proper organisation of construction resources and overall efficiency of construction operations (Egbu et al., 2004). Significantly, the level of education of site managers was found to be a challenge to the discharging of site manager responsibilities on construction sites (Table 4.7). Kazaz et al. (2008) note that the proper qualifications of construction managers are essential to construction workers performance while Fapohunda and Stephenson (2010) identify the need for training and personal development of construction managers, especially on new technology for improved utilisation of construction resources. The decisions of site managers on construction projects are found to be of considerable importance to the efficiency of construction labour (Table 4.7).

Olander (2007) claims that a significant challenge confronting site managers is the difficulty of ascertaining the needs of construction project stakeholders, comparing these needs with the project objectives and deciding on the best decisions to adopt.

5. INTERVIEW REPORT

The first interview was conducted with a site supervisor on May 13, 2014 at 12h17min in the construction site office during the lunch break. The site supervisor interviewed had twenty-five years of site supervision experience in the construction industry. The interview session lasted for about forty-five minutes, as the interviewee responded to each question after a reading by interviewer from a printed copy. The site supervisor stated that, based on past experience, site managers communicated well on site but quite often there was misinterpretation of messages. The respondent indicated that site manager coordination on construction sites was good, based on experience, but could be improved. The site supervisor stated that the site supervisor's skill was satisfactory on construction sites. The site supervisor added that communication problems like language barriers, and inclement weather conditions, were issues that affected the efficiency of construction workers. The second interview was conducted with a site supervisor on May 14, 2014 at 12h05min in the worker's common room during the lunch break. The site supervisor interviewed had sixteen years of site supervision experience in the construction industry. The interview session lasted for about thirty-five minutes, the respondent noted that some of the construction managers he had worked with communicated well, while the communication skill of some managers was insufficient. The respondent further expressed that communication effectiveness depends on the competence of site managers on a particular project. The site supervisor stated that strikes affect construction workers' efficiency, because labour does the actual work. He indicated that the coordination efforts provided by construction site managers were not satisfactory on sites, particularly on the site in question. The site supervisor also noted that the efficient performance of site supervisors depends on their construction experience and educational background. The respondent stated that the construction skill of the site supervisor was fair.

The third interview was conducted with a site supervisor on May 15, 2014 at 10h05min in the construction site office. The site supervisor interviewed had twelve years of site supervision experience in the construction industry. The interview session lasted for about thirty minutes, with the respondent answering questions after the interviewer read them from a printed copy.

It was the opinion of the respondent, based upon person experience, that the construction site manager's communication skills were not good enough and needed to be improved. The respondent believed that site manager coordination was important to achieve good production standards, and was of the opinion that the site manager's coordination skills were average for the industry. Based on personal experience, the respondent felt that the majority of site supervisors had adequate construction skills but that there were other factors that affected labour efficiency, like factors that were beyond the control of site supervisors. The respondent stated that construction sites experienced shortage of construction materials, but not on a regular basis. The fourth interview was conducted with a site supervisor on May 15, 2014 at 12h23min in the construction site office. The site supervisor interviewed had ten years of site supervision experience in the construction industry. The interview session lasted for about thirty-five minutes. The interviewee responded to questions read from a printed copy by the researcher. Missing information in architectural drawings was perceived to occur quite often on construction sites. The site manager's communication skill needed improvement because it was important to project performance on sites. The site supervisor expressed the opinion that the communication skills of site manager were not good enough on construction sites. The site supervisor stated that the coordinating skill of the site manager was mostly fair, but sometimes unsatisfactory.

The skill of the construction site supervisor was sometimes poor, and this affected the output of labourers. The respondent indicated that sometimes there were shortages of construction materials on sites, but that this was an infrequent occurrence. The fifth interview was conducted with a site supervisor on May 16, 2014 at 11h15min in the construction site office. The site supervisor interviewed had twenty-eight years of site supervision experience in the construction industry. The interview session lasted for about thirty minutes while the interviewee responded to the questions read from a printed copy. The site supervisor stated that the communication ability of construction site managers on construction sites had not been encouraging. Based on the respondent's personal experience, the site manager's coordinating skill needed to be improved on this construction project. The respondent stated that the site supervisor's construction skills were good, but could be improved upon. The sixth interview was conducted with a site supervisor on May 16, 2014 at 12h22min in the construction site office, during the lunch break. The site supervisor interviewed had eight years of site supervision experience in the construction industry. The interview session lasted for about thirty-five minutes, as the interviewee responded to each question after a reading by the interviewer from a printed copy. The site supervisor stated that the construction site manager communicated effectively on sites, but sometimes the message was not understood by the recipient. The site managers on this site tried his best to coordinate well, but needed to upgrade his skills. Many site supervisors had labour skills; construction skill of supervisors was satisfactory, as it was company practice to attend skill development programmes once a year. The respondent added that labour absenteeism and faulty equipment also slowed down construction operation.

6. CONCLUSIONS AND RECOMMENDATIONS

The objective of the study evaluates the impact of construction-related factors on the efficiency of the construction workforce. All the identified factors in the study attract more than 50% agreement rate from respondents.

Therefore, it could be safely concluded that the majority of the identified construction-related factors significantly affect the efficiency of construction labour on sites. Nonetheless, the most significant factors affecting construction labour efficiency on this subject are essential to be noted, if improvement of construction labour efficiency is to be achieved. It is found that the communication ability of site managers, site managers' coordination skills, construction skills of site supervisors and communication between supervisors and construction labourers on construction sites are essential factors to improving the efficiency of construction labour. The study also reveals shortage of construction materials, inclement weather conditions on construction sites and challenges associated with construction site planning as some of the factors affecting the efficiency of construction labour

The success of construction projects significantly hinges on the efficiency of construction site managers and individual site supervisors. Work experience of construction managers and site supervisors is insufficient to ensure successful delivery of construction projects. The ability of site managers and site supervisors to effectively communicate project objectives to project teams and effectively coordinate construction labour is affected by variables other than working experience in the construction industry. Construction site managers and site supervisors are required to integrate practical knowledge acquired in the industry and management skills to effectively communicate project objectives to construction teams. Irrespective of the working experience of site mangers and site supervisors in the construction industry, management training that includes communication, skills development and site coordination principles is recommended for construction site managers and site supervisors on consistent basis on construction projects in Gauteng and Western Cape Provinces. This will go a long way in solving current defective communication system on construction sites.

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