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Traditional Knowledge Systems in Natural Resource Management and Rural Livelihood Enhancement: A Study of Lawra District of Ghana

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Abstract

Natural resources have for centuries been an important part of peoples' diet, economy, and culture. Access to and use of natural resources, and notably land, has been and still is the key means to survival for a majority of the peoples in Sub-Saharan Africa. The control and use of land and other natural resources has been the way to sustain the family or the household, to maintain the clan and to enrich the people or ethnic groups. There is direct and indirect links between natural resources, food security and poverty. In areas of abundant natural resources such as fertile lands, good water sources, and forests in northern Ghana, there tends to be abundant food. In areas of chronic food shortages, natural resources are used to directly bridge the food gap. People derive different livelihoods from varied natural resources for their living. These resources need to be sustained through proper management practices by the use of traditional knowledge systems as the people are over exploiting them. Modern management systems to the communities tend to rather exploit these resources instead of conserving or preserving them. Communities therefore argue that, in order to have sustainable resources, there is the need to resort to traditional knowledge systems as they are friendlier to resource depletion than resource degradation. This is because, their livelihoods revolves around these resources. Promoting traditional knowledge systems would be the best way for the available resources in their communities. A combine ethnographic and survey techniques to gather both quantitative and qualitative data was employed during the research as a methodology. In addition, an extensive literature review was also used in the methodology. The issues that emanated from the findings indicated that traditional knowledge systems are available in the study area. The available natural resources in the study area were/are fairly adequate. The conclusions drawn from the analysis show that, traditional knowledge systems still exist and constitute the major form of management systems within the study area. It is recommended that local knowledge systems and that of modern knowledge systems need to collaborate in solving this problem of resource depletion in the area.

KEY WORDS: Traditional Knowledge Systems, Natural Resource Management, Rural Livelihood Enhancement, Lawra District

Introduction

Natural resources have for centuries been an important part of peoples' diet, economy, and culture. For people living in or near forests, plants and animals have provided food, medicine, hides, building materials, incomes, and served as sources of inspiration and spirituality. Rivers have provided transportation and fish, and water and soils have provided a permanent source of sustenance (Steiner et al, 2004). Access to and use of natural resources, and notably land, has been and still is the key means to survival for a majority of the peoples in Sub-Saharan Africa, (Lars-Erik, 1993:3). The control and use of land and other natural resources has been the way to sustain the family or the household, to maintain the clan and to enrich the people or ethnic groups(Lars-Erik, 1993:3).

Studies show direct and indirect links between natural resources, food security and poverty (Millar, 2003). According to Millar (2003), in areas of abundant natural resources such as fertile lands, good water sources, and forests in northern Ghana, there tends to be abundant food. In areas of chronic food shortages, natural resources are used to directly bridge the food gap. Almost all incomes of households are obtained directly or indirectly from natural resources- largely emanating from woodlands (Millar, 2003). Different people derive livelihoods from varied natural-resource use and management activities, ranging from game hunting, livestock and crop production, to the collection of thatch grasses, medicinal plants and marine resources (Leach, Mearns and Scoones , 1999).

Under traditional or customary (ethnic) law, land and the fruits of the land belong in the first instance to the spirit world (Abu 1998; Millar 2001) cited in Millar 2001. The use of natural resources, both plant and animal, was done with respect to and guided by conservation requirements of never using more than what would provide sufficient seed for the future (Abu 1998; Millar 2001) cited in (Millar 2001). Traditional communities therefore derive both their socio-cultural and spiritual identity, in part, from the land. Indigenous practice was based on a sense of harmony with the natural environment, which resulted in sustainable practice and sustainable use.

The Dagara of the Lawra District of Ghana attest to the argument above. Communities usually pass on their indigenous knowledge of resource management to the next generation through oral transmission. Sustainability of these natural (cultural) resources is therefore necessary for mankind in Africa, Ghana and more especially the study area as a whole.

Methodology

An extensive literature review using secondary data sources was adopted for the study. A combine ethnographic and survey techniques to gather both quantitative and qualitative data was employed during the research. According to Osuala (2007: 254), the survey researcher is interested in the accurate assessment of the characteristics of whole populations of people. This enabled the researcher (me) to infer the corresponding characteristics in the population. Community and household (individual) level survey was conducted for the purposes of this research in each of the selected communities. Combining both qualitative and quantitative is informed by the fact that, though the two differ in many ways, but they complement each other as well (Neuman 2006: 151). Both methods are necessary in the sense that, there is more than one gate to the kingdom of knowledge. Therefore, I considered the two approaches – qualitative and quantitative methods which data are contained within the perspectives of people that are seen as those with vested knowledge in resource diversity and resource management of local institutions as well as individual/group participants. The focus group discussions which formed part of the community level survey, local people who are considered experts in natural resource management practices were drawn from within the selected communities to discuss

the issues on resource diversity and existence. With gender sensitive three generational approach as part of the households survey, individuals - males and females - including family heads in the generations were interviewed using questionnaire that answered issues on local resource management systems. This was done using in-depth interviews. These surveys enabled me gather information about the community members' perceptions, their relations with the environment and how natural resource management systems enhance their livelihood to reducing poverty in each of the communities and the district as a whole. The main characteristic of ethnographic research is familiarity with the subject, closeness to the respondents, quality and type of relationship between researcher and the researched, which must be at least equalitarian and referenced to the large sociocultural system as the explaining source (Sarantakos: 1998). The choice of Lawra District for the study was informed by the fact that, environmental degradation is eroding the available natural resources in the district as a result of population increase leading to resource depletion while the peoples' livelihoods is dependence on the available natural resources.

Conceptual Framework

Some concepts have been central in the analysis and investigations presented in this paper and need further elaborations for better understanding of the problem at stake. These are traditional knowledge systems, natural resource management, and rural livelihood enhancement.

Natural Resource Management Systems

Competition to control access to land, water, forests and other natural resources in rural Africa is growing especially for common property resources that are used by many people to meet their basic needs. These resources provide millions of people with grazing for their livestock, timber and fuel wood for their homes and a wide range of other products such as famine foods, fruit, medicines and honey for domestic use and sale. Poor people, or those on the margins of society or without easy access to land, are especially dependent on these resources for their livelihoods (Iied, 2002). The term 'community-based' distinguishes the emerging approaches from an earlier concept of community natural resource management, which refers to communities having full and generally autonomous responsibility for the protection and use of natural resources. This approach has derived from or been modelled after indigenous systems of natural resource management, where local knowledge, norms and institutions have co-evolved over long periods of time with the ecosystem in question. This often makes for well-attuned management regimes though it does not invariably make for a commitment to the conservation of natural resources (Uphoff 1998). Vedeld (1992) also sees natural resource management as all aspects of rangeland and water management. This include the operation of water and land rights, resource use conflict resolution, range patrolling, regulation of transhumance, adjustment of stock rates, herd splitting and changes in species composition, regeneration of pasture, fire control, tree protection – as well as management of crop – livestock integration (labour – animals, use of manure, stall feeding, fodder harvesting and production). It needs also to be appreciated that how resources are viewed and used is conditioned by political and power relationships, not just by abstract or inexorable trends in biophysical or demographic terms.

Local communities may be shown to be dynamic and internally differentiated, and the environmental priorities and natural-resource claims of social actors positioned differently in power relations may be highly contested. These factors point to the importance of diverse institutions operating at multiple scale levels from macro to micro, which influence who has access to and control over what resources, and arbitrate contested resource claims. (Leach et al. 1997: 5- 6). Local decisions and actions collectively and cumulatively shape the course of

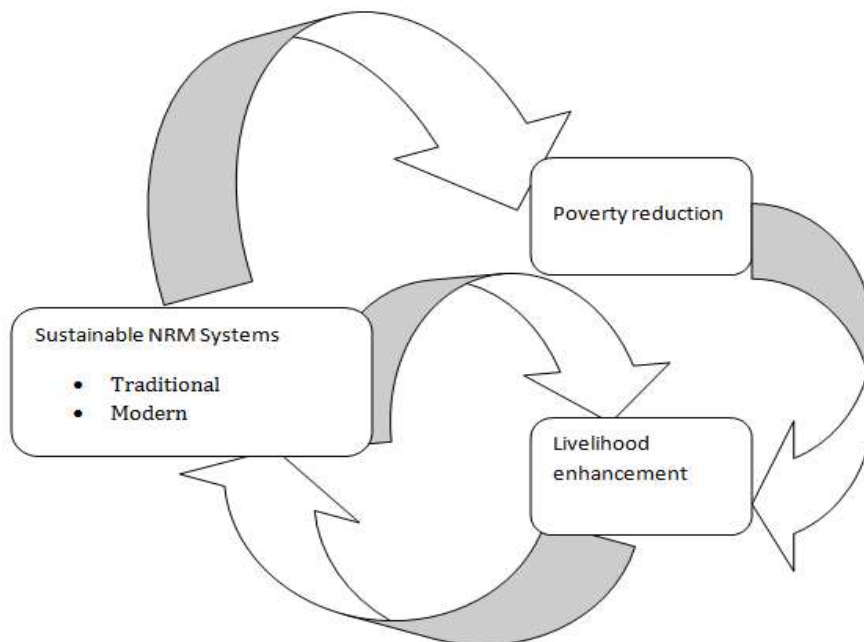
ecosystem conservation or degradation in pervasive ways. It is mostly within the purview of communities that forests are cleared, land is cultivated, wild flora and fauna are collected, and water sources are affected by resource management practices. Impetuses for these practices may come from outside communities, but communities are where “the rubber meets the road.”

Not all community decisions and actions with regard to natural resources are benign. They can range from resource-degrading to resource-conserving, and sometimes resource-enhancing. This makes it all the more important that local understanding and support for conservation objectives be gained and maintained, since government abilities to enforce decisions favouring natural resource protection are so often limited. A community-based approach recognizes and reinforces the stakeholder role of people living in, on and around vulnerable natural resources, both for these people's sake and for that of future generations, for people living in the immediate area but also in the rest of the country and the rest of the world.

CBNRM Strategy

Community-based natural resource management (CBNRM) presumes that local residents can understand and will support larger interests and principles of conservation, factoring these into their economic, social and cultural considerations about how natural resources should best be treated. It should not, however, idealize or romanticize local resource users, who for a variety of reasons – economic, social or cultural – may be more disposed toward resource-degrading behaviour (RDB) than resource-conserving behaviour (RCB) (Uphoff and Langholz 1998). Sometimes communities may preserve the resources within their own jurisdiction by diminishing those of neighbouring communities, as in the case of the Madan Pokhara panchayat in Nepal (Acharya 1984). Threats to natural resource sustainability can come from any level, from micro to macro, so decisions are not entrusted entirely or exclusively to higher levels or to lower ones. The essential feature of CBNRM is starting with communities, taking them into confidence and having confidence in them. It engages their ideas, experience, values and capabilities on behalf of resource conservation objectives, at the same time it seeks ways for communities to become better remunerated and better served.

Figure : Link between Natural Resources, Poverty and Livelihoods



Source: author's construct, 2009

As stated in the introduction earlier, there is a direct link between natural resources and poverty reduction. In figure 1, if communities embark on sustainable management practices of these resources, poverty will be reduced which will go a long way to enhancing their livelihoods. It is therefore prudent for communities in the study area to conserve the available resources for the generations to come.

Traditional Institutional Ways of Managing Natural Resources

Traditional institutions have been understood as local, collectively agreed upon social arrangements that govern the interactions among members of a given group (Bacho, 2004). Traditional institutions evolve over time, and thus reflect the time, place and experiences of the group. Under traditional tribal law, land and the fruits of the land belong in the first instance to the spirit world. The first settlers through spiritual intermediation of their leaders covenanted with these spirits to gain user rights in exchange for certain ceremonial rites. This covenant was passed down over time through the 'Tindamba' whose spiritual role binds the community with the spirits, the ancestors the present, the future generations and regards man and physical objects such as mountains, trees and rivers as a continuum of the same ancestry. The use of natural resources, both plant and animal was done with respect and guided by conservation requirements of never using more than what would provide sufficient seed for the future (Abu 1998, Millar 2001, cited in Millar 2003). Millar further argued that the image of the family found expression in how people related to their shrines and groves. Families and communities had extended family relations with their shrines and groves that they regarded as their ancestral origin and could neither wrong nor disobey.

The living thus saw themselves as the children of shrines and groves because of these close bonds. By their prescriptions for natural resources exploitation and prohibition from exploitation of other totems, they ensured there was peaceful co-existence between mankind, vegetation, trees, animals and other forms of life on earth. Stones, rocks, mountains, rivers and the aquatic life they contain were similarly protected or regulated in their use as the ancestors passed on. Traditional form of managing natural resources for me is nothing other than the arguments advanced so far above.

Not only that, Haverkort et. al. (2003) also emphasized that; religious consideration dominates the ordering of daily life in African societies. The beliefs in mystical powers exist. This is reflected in the existence of institutions in the rural setting such as the Tindamba as well as the modern chieftaincy institutions in the study area. These traditional institutions are structured and exist in every community. Building relationship with them leads to the establishment of a form of cooperation and respect (Haverkort and Millar, 1994). These institutions which form part of the indigenous knowledge systems of a people are imperative for development since they influence the selection and integration of externalities into the local practices (Dessein, 2005). Until recently, this view has been incapacitated by colonialists thus limiting the capacities of rural people to solve their own problems and developing technologies and skills that serve their own needs (Haverkort et. al., 2003). Millar 2003, further argued that the resilience of shrines and groves despite the religious battles against them and their survival, in spite of the varying levels of the degradation calls for policy attention to native religion as a way of conservation, management and sustainable utilization of natural resources. He made the observation that people still respect and revere shrines and groves for what they stand for. This is why they have survived the test of time and are still relevant in the community-based organization. In his conclusion, modern governance systems tried to take away traditional role of local leaders including spiritual leaders as the owners and custodians of natural resources on behalf of the people that brought conflict into natural resource exploitation which I agree with.

Probably the reason been for effective management of these resources but rather tend to overexploitation by themselves. However, in the case of the study area, though those modern institutions exist, their influence on traditional management of these resources is not much felt as compared to the forest areas of the southern belt of Ghana. In traditional set up the main rule governing access to these natural resources is that insiders has the right of access to resources for free, while outsiders has to pay a tribute to the insiders in the form of proceeds from farms and more often than not economic tree fruits such as dawadawa and shea are not to be harvested by the outsiders

Rural Livelihoods Sustainability

Livelihood and natural resources are closely interlinked. The survival of humankind depends primarily on both the availability of natural resources and the ability to use them sustainably and economically to improve the quality of people's life. This is what natural resource management is all about. The argument here is that, we cannot act outside nature. We can only act within the limits, boundaries and laws as set and allowed by forces of nature (Achoka, 1996). Livelihood is a sustainability function of culture but it cannot be achieved without the requisite natural resources and an enabling environment. Nature provides normally rich, diverse resources for use by people to sustain livelihood but whether this is done is an issue for discussion (ibid). One premise on which livelihood and management of natural resources are founded is that people have knowledge, apply skills, derive values and see the usefulness of natural resources.

Sustainable livelihood approach incorporates many of the common concepts of assets, capabilities, and entitlements in assessing local peoples' livelihood and vulnerability (Moser, 2008). The emphasis is on livelihoods, and defined as the capabilities, assets (including both material and social), and activities required for a means of living (ibid). Thus, Carney (1998:1) defines a livelihood as sustainable when it can cope with and recover from stresses and shocks and can maintain or enhance capabilities and assets both at that time and in the future, while at the same time not understanding the natural resource base. A livelihood thus comprises the assets (natural, physical, human, financial and social capital), the activities, and the access to these (mediated by institutions and social relations) that together determine the living gained by the individual or household (Cain et al, 1988). Natural resource management in enhancing livelihood is the centre piece of the discourse which convinces me to agree with the above definition. The approach is founded on the belief that people require a range of assets to achieve positive livelihood outcomes, with no single category of... The understanding that income definitions are inadequate to lay out the complexities of experiences of poverty and how poor people ensure survival owes much to the work of Robert Chambers. Vulnerability and well-being are two key concepts in his understanding of rural poverty, and both are defined in terms of poor people's own perceptions. Rural people seek to counter the vulnerability arising from high levels of risk and uncertainty through deploying tangible and intangible assets. These assets according to Choka, are the natural resources at the community level comprising water, natural bush with diverse species of plants (medicinal, fruits, habitat for insects and other forms of life), grassland and soils, among others. A living is thus made through a portfolio of activities, so that households and individuals are flexible and can adapt to a wide range of misfortune and external shocks.

The concept of sustainable livelihoods focuses on creating opportunities for the poor as opposed to providing protection. Thus, it addresses directly the critical role played by assets and capabilities in improving individual and household social and economic well-being and associated poverty reduction (Moser, 2008). The assets of the people of Lawra district is

predominantly the natural resource base of the area. As they harness them for their livelihoods, it is important that these resources are properly managed to create the necessary opportunities available to enable them enhance their survival. Though, they need the support of the other capitals, natural capital which Moser (2008) agreed with Bebbington, (1999) is more relevant to indigenous people in rural communities. Changes in people's livelihood strategies are fuelled by changes in their environment, (Kees, 2004:76). Changes in a natural environment in a particular area, changes the livelihood strategies of the people in that area. Adaptations are therefore necessary.

The Political Administrative District Location and Natural Environment

The research was carried out in the Lawra District of Upper West Region of Ghana. The Lawra District comprises the Lawra traditional area with a constituency. It borders the newly created Nandom District to the north, Jirapa District to the southeastern and southern parts, and on the northeastern is the Lambussie/Kaane District and the west by Republic of Burkina Faso. It lies in the north western corner of the Upper West Region between latitudes 2° 25" W and 2° 45" W, and longitudes 10° 20" N and 11° 00" N (District Medium Term Development Plan 1996-2000, 2009). The ecological zone to which my research area belongs is generally referred to as 'Guinea savannah woodland'. Kees, (2004: 80) described the ecological area as 'Orchard bushland', 'tree savannah', 'Sudanese parkland', 'savannah woodland' and 'interior savannah zone'. Kees therefore argued that, the area is covered with savannah grasses, shrubs and scattered trees. The vegetation is characterized by the guinea savanna type with scattered drought resistant trees such as the Shea, the baobab, locust bean (dawadawa) ebony and torn. Kees agreed with Nsiah-Gyabaah (1994: 135-136) that generally the density of trees decreases where population density increases. The climate of the district is that of tropical continental with the mean annual temperature ranging between 27 and 36 the period between February and April is the hottest.

Findings and Discussions

Traditional Natural Resource Management Systems

This section looks at the traditional institutions that are available and managing natural resources within the study area and the adequacy of these resources in enhancing rural livelihoods.

Available Traditional Systems

Data from the survey indicates that African traditional systems exist and are active in the study area comprising Chiefs and Elders, Tendanas (Earth Priest), Landlords/Clan/Family heads. From the data, Landlords/Clan/Family heads constitute the most active group of traditional authorities in the study area probably because of the 'acephalous' nature of the people. That is (segmentary lineage systems) of the people before the advent of Europeans.

68.3% of the respondents admitted that Landlords/Clan/Family heads has much control over natural resources particularly land, simply because they owe the land and all the resources on that piece of land. Chiefs were introduced in the early twentieth century by the Europeans as warrant chiefs who had no and still have no and or limited power in controlling natural resources within their jurisdiction. The Tendanas are been assisted by the Landlords/Clan/Family heads in his spiritual executions of issues concerning the community. Females are again marginalized as 'Tengdem' are made up of only males in the study area. Women act in advisory capacity and observers and report to their men any destruction of the environment since their livelihoods surround the resources as they are the primary gatherers.

One other important system that is not captured by the questionnaire but relevant and came up during the in-depth interview discussions is 'Tengsob or Tengsogsob' (Landowner or Landlords that is the person who owes the land in some communities) which is different from Tengansob or Tendana (spiritual head). In some instances, the Tengsob might wield the powers of both the landlord and the spiritual head but in others these powers are separated. All these people together formulate and impose laws on the management of natural resources through spiritual invocations on offenders and outright punishment in the form of fines.

Natural Resource Adequacy

Land is used for agricultural purposes and forest resources such as dawadawa (locust bean) and shea trees complement the livelihoods of the community members through food supplements and income. Food supplements and nutrients are derived from water bodies as well as income through the sale of fish from rivers. From the data, agricultural land is fairly adequate as it is only 46.3 % that is adequate for community members. From the data, 51.2% of respondents for forest resources, 63.4% of respondent for water bodies and 43.9% respondent for wildlife among others are fairly adequate or inadequate from community to community. As land and forest resources are inadequate, wildlife resources that depend on them becomes scarce too. Livelihood systems more often are eroded. It therefore means that the people would have to adopt alternative means of enhancing their livelihoods may be through remittances from relatives among others.

Natural Resources and Livelihoods

Aside natural resources been their main sources of livelihood, 21.7% of respondent engage in rearing as sources of livelihood and 4.9% of respondents are engaged in public sector jobs though with some menial farming. These resources since creation have been of significance to man as they form part of nature. By this, Marx postulated in his *Economic and Philosophic Manuscript* of 1844 in (Mishra, 2001) where Marx defined nature as "man's inorganic body", pointing out that "man lives on nature" and he takes from nature all the means necessary for his existence. It can therefore be concluded that, these resources which are vital to man's existence if destroyed would have negative repercussions as many lives would suffer. From the data, 61% of respondents depend solely on these resources as against 39% who through other means earn their living.

Opportunities Available for Indigenous Knowledge Institutions

Traditional authorities had and continue to use various means of indigenous knowledge institutions in the management of resources surrounding their environment aim at enhancing the livelihoods of the people, hence reducing poverty. Through these indigenous institutions, rules and regulations are made by authorities pertaining to the environment for the community members to protect and conserve the available natural resources in the community. Indigenous institutions are informal institutions made up of structures which allow them to govern their own affairs in culturally acceptable ways through which their traditions are transmitted to future generations. Leach et al. 1999:238 supported by Gottret, (2007) asserted that, regularized practices, performed over time, eventually constitute institutions, which may be formal or informal, i.e.: [f]ormal institutions maybe thought of as rules that require exogenous enforcement by a third-party organization. Informal institutions, however, maybe endogenously enforced; and are upheld by mutual agreement among the social actors involved or by relations of power and authority between them.

Table 2.0: Available Opportunities

Opportunities	Frequency	Percent
Use of customary laws	37	90.2
Adherence to Taboos and Totems	4	9.8
Total	41	100

Source: Field Survey May, 2010

The analysis above confirms the table where indigenous institutions formulate laws for their communities on their environment. The study shows that 90.2 % of respondent use customary laws in the management of natural resources which is an enormous opportunity for the people. Though 9.8% of respondents adhered to taboos and totems they necessarily do not constitute laws. They serve as ethical norms that are binding the people naturally against the destruction of these resources. Their survival is dependent on the resources in their environment.

Traditional Management Process

As stated earlier, before modern institutions, resources were managed by the local people through their own ways and were accepted. When community members were interviewed how resources were managed in the pass 25-50 years, 92.7% agreed that cultural rules and regulations were the norm which were passed down form generation to generation onto them and was suitable. Ethical sanctions as well as taboos and totems together constitute 7.3% of the management process. They argued that, in the case of land which is their most important resource, traditional tillage system is much preferred as tractor ploughs usually overturn the top soil thereby denying the crops of the needed nutrients for growth.

Table 2.1: Pass Management Process

Pass management	Frequency	Percent
Through cultural rules and regulations	38	92.7
Through taboos and totems	2	4.9
Ethical sanctions	1	2.4
Total	41	100

Source: Field Survey May, 2010

From the table it is clear that majority of respondents favour the use of cultural rules and regulations in natural resource management because the soil texture within the area is not suitable for modern management systems.

Summary and Conclusions

African traditional systems exist and are very active in the study area comprising Chiefs and Elders, Tendanas (Earth Priest), Landlords/Clan/Family heads as indicated by the findings. 68.3% of respondents said Landlords/Clan/Family heads still constitute the most active group of traditional authorities in the study area. "Tengsogsob" is the one who demarcates the boundaries of the community land to be administered by the Tendana and the chief. Communities in the study area do realized that, effective management of NRs lies in the hands of all these institutions. Together, they formulate and impose laws on these resources through

spiritual invocations on offenders and outright punishment in the form of fines and some calamities.

Available and adequate natural resources in a society are major determining factors in rural livelihoods enhancement. Abu-Juam (2002) corroborated the above that, the availability and management of natural resources are crucial for the sustenance and livelihood of communities of Northern Ghana as their socio-cultural, health status and economic activities are very much dependent on the natural environment. These resources are fairly (in)adequate for community members in the district.

Recommendations

The study aimed at assessing natural resource management issues in rural communities and how these affect their livelihood systems. In this vain, the following recommendations are made in addressing the findings that emerged from the research.

The use of endogenous approach in natural resource management will be of significance to communities' livelihoods. This is so because, blending both traditional and modern methods in managing these resources helps in sustaining the environment. Haverkort et. al, (2002: 256) defined endogenous development to be "development based on but not exclusively, on locally available resources, local knowledge, culture and leadership, with the openness to integrate traditional as well as outside knowledges and practices". Therefore, CBNRM should be centred on endogenous development approach by looking at indigenous knowledge systems (IKS) that are relevant and integrate them with modern knowledges.

There is the need for people to be sensitized to change their attitudes towards culture and take the good aspects of the culture relevant for preserving the environment. Natural resource management should be in the hands of traditional authorities as well as community members who owe and control their resources for generations to come for effective management to enhance their livelihoods.

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Decision Making by Burglars: A Qualitative Study in a Korean Context

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Abstract

The relation between crime and its physical context continues to be the focus of a growing body of research within environmental criminology. The research design and methodology employed in the study consisted mainly of qualitative research techniques adjusted to suit the specific needs of the study. A purposive sampling method was used to select the fifty-two subjects interviewed. The majority of the subjects came from the Incheon Metropolitan City area, and all of them had committed one or more residential burglaries. A central focus of the study was the subjects' target-selection methodology, and they were queried as to how they went about identifying a suitable residential target for burglary. Special attention was given to the extent to which the subjects in the study sample utilised rational processes to select a potential burglary target, and what situational conditions and features they used as discriminative cues in this target-selection process.

Keywords: Burglary, Decision Making, Target Selection, Rational Choice

1. Introduction

In the Republic of Korea crime is viewed as a threat to the stability of the country and as an impediment to economic development. Since the 1990s crime prevention has emerged as a key challenge facing the Korean Government, and various initiatives have been undertaken to strengthen the country's law enforcement capabilities and to encourage the private sector and research institutions to assist in the task of crime prevention. In this context, recognising the need for research on the 'crime problem' in the Republic of Korea, it was decided to focus this study on a specific form of crime that has significant impact on the daily lives of many citizens, namely, residential burglary. Under the provisions of Section 330 of the Korean Criminal Code (2012), residential burglary is defined as the unlawful entry of a house or similar structure, with the intent to commit a theft on the premises.

Residential burglary represents not only an intrusion of privacy and the theft of private property, it also fosters a climate of fear and anger in the community. This situation poses a challenge to the safety and security of ordinary citizens. Law enforcement agencies, however, tend to regard residential burglary as less serious than some other forms of crime, due to its non-violent nature. Specifically, burglars are rarely encountered by their victims unlike in the case of robbery. Furthermore, the facts that most stolen property is never returned to the owners and property protection primarily falls within the domain of private security have contributed to underestimating the importance of controlling residential burglary (Bernasco & Nieuwebeerta, 2005). Despite this tendency, in the Republic of Korea, residential burglary remains as one of the most frequent crimes and its rising cases are expected to continue to the foreseeable future, calling for viable measures to solve the lasting societal issue by which the country has been plagued for decades. Most of the crime research registered at the Korea Research Foundation has been directed towards forms of crime other than residential burglary.

Thus, it is clear that at present there can only be a limited understanding of the situational dynamics and context in which any particular burglary event takes place; and that consequently, a poor scientific basis exists on which to build appropriate preventative measures against the occurrence of such burglaries. In order to better understand residential burglary, it is important to explore the following question: how do offenders make decisions and identify their targets? This study seeks to answer that question.

2. Empirical studies on the burglar's viewpoint

During the 1970s, a few notable descriptive studies on burglary (e.g., Waller & Okihiro, 1978; Pope, 1977; Reppetto, 1974; Scarr, 1973) were carried out; these researches placed a great emphasis on the situational cues in understanding the patterns of residential burglary. Although these studies deserve credit for providing remarkable insight into burglary prevention, they failed to analyze the viewpoint of the offenders at a profound level and little was discovered on the burglars' decision-making processes in regard to the alteration of situational features.

In the following decades, a number of offender-based researches examined the target selection and decision making of the residential burglars. By combining the accounts of the offenders and the research findings, the authors of these studies examined the validity of the assumptions of Situational Crime Prevention Theory; and Maguire and Bennett (1982), Bennett and Wright (1984), and Cromwell et al. (1991) have had a major influence on the present research. The findings of the three studies suggest that burglars go through a type of rational evaluation process before executing their offences and recognise certain cues before finalising their decisions to offend. Particularly, the burglars tend to weigh the costs and benefits

associated with committing their crime and deliver their actions when the benefit outweighs the cost.

Maguire and Bennett (1982) interviewed forty persistent burglars and identified a variety of environmental cues that offenders used in their target selection. They suggested that the typical burglar was far less opportunistic than had previously been assumed, with the majority demonstrating discrimination and expertise in the selection of targets rather than responding impulsively to random opportunities. When selecting an area in which the burglary was to occur, burglars were concerned with the familiarity of the area and the type of property they were looking for. Once within what they considered a suitable area, the primary concerns for most burglars were occupancy of the target residence and the degree of cover offered by walls, trees, shrubbery or other buildings.

Bennett and Wright (1984) interviewed more than three hundred burglars in prison, focusing on how burglars planned their crime. In planning burglaries, cues associated with the target residences were used and they were divided into three distinct categories: risk, ease and reward. The risk factor included burglar alarm, occupancy, dogs, cover, presence or proximity of neighbourhoods and others. The ease factor included locks and design of potential entry points. The reward factor was not broken down into any specific components. However, the risk factor seemed to be the most important one. The respondents often mentioned 'surveillability' and 'occupancy' as the most important cues.

Both Maguire and Bennett's (1982) and Bennett and Wright's (1984) studies used the prison-based samples. However, Cromwell et al. (1991) examined the decision making of active burglars. They interviewed thirty persistent burglars and found that a burglar's decision to commit a crime was based primarily on environmental cues. Based on their findings, they divided environmental cues into three categories. The first category consisted of cues that indicated the surveillability of the target residence. This factor referred to the extent to which a residence was overlooked by neighbours or passers-by. The second category was made up of cues that indicated whether the residence was occupied. Most burglars tried to avoid residents. The third and final category was comprised of cues that indicated the degree of difficulty that might be expected in the actual commission of the burglary into the target residence

The present research relates both methodologically and conceptually to the above-mentioned studies. As was the case in these earlier studies, personal qualitative interviews with residential burglars are utilised in the present study to yield the type of information required to answer the key research questions. In addition, the present research also focuses on burglars' decision making with special attention on the extent to which burglars make rational choices, as did the earlier studies. Thus, the overall objective of the present research is to look at burglars' decision making processes in another context (i.e., in Korea) to see if similar patterns can be identified, and to look more closely at what type of situational cues are central to burglars' target selection in the Korean context. Therefore, the research question in the present study is similar to the key questions considered by these earlier offender based studies.

3. Research Methods

3.1 The Qualitative Approach

By reviewing the past studies, it can be noted that the criminals' decision making processes and the situational factors that affect them are best understood through examining the offenders. According to Tracy (2013), qualitative studies are suitable for revealing the meanings assigned to the experiences by individuals. Moreover the emotions, motivations,

empathies, and other subjective aspects can be understood at a deep level through utilizing such method.

In order to undertake a qualitative study of the burglary process, it is necessary to adopt a research method that will ensure an in-depth understanding of the situational criteria that can influence the course of that process. Qualitative interviewing is appropriate for this purpose, since such interviewing provides the intellectual framework for learning about events and activities that are not observable directly. In this type of interviewing, the people interviewed are informants, in the truest sense of that term. Acting as observers - the eyes and ears in the field - for the researcher, they bring him or her, information. The role of such informants is not simply to reveal their own views in relation to an event, but in particular, to describe what actually happened.

In this study, the technique of the semi-structured form of interview was used as the method of acquiring information from the people selected for interviewing. The interview schedule consists of a mixture of closed and open questions that was organised into three sections. In Section One, (which was effectively the 'structured' part of the schedule), demographic information about the subject was sought through closed questions. In the remainder of the schedule, (which comprised the 'semi-structured' part of the interview), information was first sought through closed questions on target selection (Section Two) and method (Section Three); and then these closed questions were supplemented by open ones inviting subjects to 'explain', 'describe', or otherwise 'elaborate' upon, their initial answers.

Throughout the application of the schedule, subjects were encouraged to be open and to speak spontaneously about issues, using their own language rather than language imposed by the researcher. It was considered important that the interview schedule should facilitate spontaneity, rather than inhibiting or obstructing it. Towards this end, the semi-structured format of the interview schedule allowed the order of questions to be varied in accordance with the direction and 'flow' of any given interview. The purpose of the interviewing process was to attempt to access the perspectives of the subjects, rather than those of the interviewing researcher; and the less structured form of the interview allowed subjects to define the world in their own individual and unique ways.

In a qualitative study, the researcher is the primary instrument of inquiry, rather than functioning as some form of inanimate mechanism (Berg, 1995; Guba & Lincoln, 1994). In this study, therefore, there was minimal psychic distance between the researcher and the participating subjects, a situation that is quite different from that which prevails in a quantitative process, where researchers maintain an impersonal research format in their approach, together with a maximal psychic distance between themselves and the subjects participating in the study. Because of the close relationship achieved between the researchers and participating subjects within the interview operation, it was possible to gain an in-depth understanding of burglars' target selection.

3.2 The Geographical Area of the Study

The study was carried out in the Incheon Metropolitan City area, where the researcher had worked as a police officer for several years prior to undertaking this study. Incheon is located on the Yellow Sea coast, on the western side of the Korean peninsula, about halfway down the peninsula, and only a short distance west of Seoul. The city displays an urban-type industrial structure, characterised by the level of tertiary industry being relatively greater than that of primary or secondary industry. The current administrative unit of the metropolitan city covers a total area of 986.45 sq. km, or 0.98% of the entire area of South Korea and it is divided into eight districts and two counties. As of December 2011, the city had a total

population of 2,853,489. Incheon is the third largest city in Korea, after Seoul and Busan respectively (Statistics Korea, 2012).

The neighbourhoods in the Incheon area appear, in terms of general public perception, to be less affluent than those of other commuter areas also lying in the larger region around the capital, Seoul. A number of different types of burglary are thought to take place in the Incheon area, and the police believe that burglaries in Incheon are committed both by local offenders and by offenders travelling from Seoul for that specific purpose - a feature that is common among many satellite cities on the fringes of metropolitan areas. Although the area investigated in the present study cannot be regarded as representative of the country as a whole, nevertheless, it is typical of many other commuter areas that also have a high incidence of burglary.

Comparing all types of crime in Korea that are reported to the police, burglary has one of the highest incidences nationally. At a provincial level, four provinces in the country, namely, Seoul, Gyeonggi, Inchoen, and Busan, exceeded the average burglary rate for 2011, and Incheon had the third highest residential burglary rate per annum (321 for every 100,000 people) in Korea (Korean Ministry of Justice, 2012).

3.3 Interview Sample Selection

The goal of sample selection was to seek subjects who had experience in the phenomena in question, namely, the burglary process and the target selection that is involved in that process. No restrictions were imposed regarding the sex, age, socio-economic background, employment, or marital status of the subjects. The sample size was determined by the factor of redundancy in the information gathered; i.e., when responses to interview questions became repetitious, indicating that sufficient coverage of the topics involved had taken place, sample selection stopped. Approaching interview number forty, it was noticed that a state of critical mass was being reached, and that, although each new respondent's life history and experience were always fascinating, in practical terms, new information on burglar decision making was becoming rare. As a result, when fifty interviews were reached, the process of conducting interviews was concluded, since sufficient information had been obtained from the subjects for the effective illustration of the phenomenon of burglary.

The primary source of data was a selected sample from among suspects who were detained in the Detention Centre at the Incheon Public Prosecutor's Office. With the objective of exploring the decision making process of the burglars to be interviewed, the criteria of a non-probability or purposive sampling method were used to select the fifty-two burglar suspects that came to constitute the sample. Croswell (2008) suggests that the purpose of sample selection in a qualitative study is to obtain an accurate understanding of meaning, and to establish possibilities, rather than to achieve a generalisation of findings. In accord with this principle, the subjects were purposely chosen as being best able to answer the research questions.

The subjects at the detention centre provided a diverse sampling frame of residential burglars with easily accessible records. Subjects were selected based on the crime for which they were being detained, and their records were reviewed in order to determine that each subject met the sample criteria. Access to potential subjects' files was made possible for this purpose, by the chief of the detention centre. If, as a result of this procedure, potential subjects were determined as satisfying the sample criteria, their participation was sought. Finally, in order for a subject to be selected, they had to be willing to correctly describe themselves as having committed at least one residential burglary of a house. All of the fifty-two subjects

interviewed in the study were male. The age range of the subjects was between 13 and 59 years old. This yielded an average subject age at the time of the interviews, of 25.1 years.

4. Burglary Decision Making

Until the recent past, most theories of criminal behaviour did not focus much attention on offenders' decision making. This omission was attributable to the apparent conflict between concepts of decision making and the prevailing determinism of most criminological theories (Clarke & Cornish, 1985; 2008), that have traditionally been concerned with explaining the criminal 'disposition' of particular individuals or groups. In those theories, the criminal is portrayed as a relatively passive figure in the offending process (Clarke & Cornish, 1985; 2008). The central problem with this deterministic approach is that while it is useful in explaining the development of criminal dispositions, it is generally unhelpful in explaining how individuals make specific decisions with respect to offending. A different theoretical approach that seems more useful in explaining criminal decision making, is the Rational Choice Perspective. This perspective has been applied to the conceptual framework of this study, which is based on the idea that potential offenders are rational in their target selection, and that, therefore, they can be viewed as acting as a result of their weighing the risks and rewards associated with any prospective burglary. It follows that, if the rational-choice model has value, its operation should be evident in the process of the actual selection of targets by burglars.

When burglars are searching for a prospective target, they have to decide on a suitable area for their search, and further, to select a specific residence to burgle within that area. Maguire (1980) suggested that in respect of the decision to burgle, the initial choice made by the burglars is their selection of the area in which the burglary is to take place. This suggestion was borne out by research done by Bernasco & Nieuwebeerta (2005), who found that once the area had been established, then the burglars would select a target residence within that specific area to burgle. Consequently, in the present study, the subjects were asked to identify and then explain, the causal factors that led them to choose, firstly a specific area, and then a specific residence within that area, as the target for their burglary.

Familiarity with an area played an important role for the subjects in the study, in determining their selection of the area. Their search seemed to be influenced by limitations imposed on them by their knowledge of any given area that they might consider as viable for target location. Those areas that a subject would frequent formed the dominant portion of his awareness space, and targets proved to be often selected from within the subject's awareness space. Furthermore, 40.3 per cent of the subjects said that their knowledge of the area in which the eventual target would be situated, was the most important factor in their selection of that area. They believed that their being familiar with the area selected, could reduce the likelihood of any surprises occurring during the burglary.

Always remember one thing about burglars. They like areas they know. They feel more comfortable there because they know of one or more possible escape routes and hiding places. (Respondent 32)

When I do a burglary, I know where I am going. If the police approach me in an area that I know pretty well, I can give quick and calm answers. I don't want to do anything that could draw suspicion. (Respondent 37)

Because I knew the layout of the Bupyung area, I always went there and searched back streets, keeping away from the police.... Back streets in the

Buyung area were too narrow for patrol cars to pass. There was no patrol in the back streets. (Respondent 41)

Most of my burglaries were committed in the area where I was born. I no longer live there, but I am familiar with people who live in the area. So I know where to go for burglaries. (Respondent 8)

According to the Rational Choice Theory, the commission of a crime requires that rational offenders have the requisite knowledge and information that will allow them to weigh the respective costs and benefits of offending at a specific place, at a specific time (Cornish & Clarke, 2008). In particular, the offender seeks to minimise risk and maximise reward (Cornish & Clarke, 2008). In the present study, the factors most frequently mentioned by subjects, as encouraging them to select a particular area in which to search for their specific burglary target, related to their familiarity with the area in question. Overall, familiarity with a given area led the subject to feel comfortable or safe when operating in that area. This key finding suggests that the burglars' decision to choose a particular area is, for the most part, based primarily on the perceived risks associated with any area that they may have under consideration. Thus, the subjects ruled out areas that were unknown to them, believing that such areas posed a risk that was higher than the subjects were willing to assume in the commission of a burglary.

These findings with respect to the importance of the factor of familiarity with an area, are supported by previous research. For example, Maguire & Bennett (1982) found that many burglars in their own study were reluctant to target residences in territory that was totally unknown to them; and that burglars in the study also felt more comfortable in relatively familiar surroundings, where they knew either the layout of the streets and alleyways in the area, or the general habits of the people living there. Also, Wiles & Costello (2000) examined offender crime patterns by analysing geocoded, police-recorded crime statistics, in England; and their results confirmed the findings of previous studies. Wiles & Costello (2000) demonstrated that, in the case of the vast majority of offenders they examined, the movements of the offender were quite short in distance. For instance, in the example of offenders based in Sheffield, England, police-recorded crime data showed that over a third of the crime trips involved were less than one mile long; over half were more than one, but less than two miles in length; and only slightly more than one-tenth (11 per cent) required travel that was greater than ten miles. When analysing burglary offences in relation to the burglar's most recent address, it was found that offences were most concentrated in the areas of the burglar's current residence. These were followed by offences in areas in which the burglar had previously lived; and finally came offences in areas which, although the burglar was neither currently or previously resident, were, nevertheless, well known to him/her (Wiles & Costello, 2000).

In the present study, young subjects (i.e., those under 21 years) showed a particularly strong and consistent tendency to seek targets only in the neighbourhood in which they lived. Beyond the constraints that have been identified above, most youthful subjects did not have access to reliable transportation. Other related factors favouring their own 'home area', included that they often had knowledge of those homes near their own that were unoccupied during the daytime; and that they believed that other neighbourhoods were unsafe for them to operate in, because their presence there could cause trouble for them with the local youth gangs operating in those neighbourhoods. Hence, the burglaries that the young subjects committed, were often within an area in close proximity to where they lived. This key insight yielded by the study, therefore, would suggest that in the case of juvenile offenders, their burglaries occur

disproportionately in those areas in which they carry out their routine patterns of daily-life activity.

I would do my neighbourhood and the two or three surrounding neighbourhoods.... There is no reason to go too far, if you can go just round the corner. (Respondent 11)

Because I do not have a car, I don't go to a distant area. If I walk with all the stuff, the police on patrol would ask me where I got all that stuff. That's too risky. (Respondent 26)

If gang members in other neighbourhoods see me walking down the street, they will hurt me. They are tough, and I am always trying to stay away from them. (Respondent 45)

The findings from prior research, however, are not consistent regarding the relation between the age of the burglars and their mobility. Reppetto (1974) found that age was an important factor in determining where the burglars operated. Juveniles tended to operate in their own neighbourhood. Eighteen- to twenty-five- year-olds would move out of their own neighbourhood to operate, for at least half of their jobs. The over-twenty-five-year-old burglars, who were more concerned with the factor of the affluence of any given neighbourhood, would travel in order to burgle in a more favourable area. Reppetto's study (1974) was carried out in the United States. However, Baldwin and Bottoms (1976), in a study carried out in England, found that although, in general, adult burglars would travel further in order to commit a burglary, than would juveniles, there was no clear-cut age distinction in this respect.

When subjects in the present study were asked what made them choose a particular area as the one in which to select a burglary target, the first and most important factor was their knowledge of, and familiarity with, the area in question. The second most important factor that subjects identified as determining their choice in this context, was the 'better pay-off' factor. Over a quarter of the study subjects (28.8 per cent) arrived at selecting a specific burglary target, only after first having evaluated the general affluence of a prospective area. The subjects believed that the more affluent areas would provide residences for burglary that would yield far greater rewards than would residences in less affluent areas. This aspect will be dealt with in detail in the following chapter.

A third factor determining the choice of a target area, as expressed by the study subjects, was that the chosen area was an isolated one. In this connection, several of the study subjects (15.4 per cent) said that they sought targets that were in isolated areas. Advantages of an isolated area that were mentioned by these subjects, included that police response time was usually slower in such areas; and that in such areas there was a reduced likelihood of there being passers-by who might spot or possibly interrupt a burglary. These subjects preferred their targets to be located in areas with very light pedestrian and vehicular traffic, and more- isolated areas answered that description.

The house was in a little corner in a quiet neighbourhood. It [the neighbourhood] was very dark and very isolated. There was hardly anyone walking around the area that might see the burglary. (Respondent 39)

There was no police station in the town. This gave me enough time to get into the house and get away before the cops or security officers arrived. (Respondent 23)

In most of the cases, I went to Gangwha because there are more isolated neighbourhoods in the area.... In isolated areas like there are in Gangwha, I am going to have more time for escape if something goes wrong. (Respondent 42)

The subjects in the study also cited a number of other factors influencing their preference for a specific area as the one in which to locate their burglary target. These factors included the degree of planning required; the type of people involved in the burglary process; getting even with the residents; no equipment or partner being required; the degree of accessibility to prospective targets; the degree of security of prospective targets against burglars; the influence of alcohol on the subject; and other related or similar factors. However, only a few subjects mentioned any one or more of these other factors; and the factors did not appear to be very important to the other subjects, who did not mention them. Indeed, sometimes these other factors did not seem to be very important even to those subjects who did mention them.

Burglars not only executed decision making when they chose a 'suitable area' to commit their crimes, but also when selecting a target that could best suit their need within the chosen area. In this study, it was found that the burglars chose their specific targets with a basis on the risk assessments related to their situational conditions. For example, the research subjects showed a tendency to assess the situational conditions associated with possible target residences, and excluded those which could cost them more than could offer benefits; and the major situational conditions included in burglars' target selection were occupancy, detectability, and physical barriers.

Over the recent decades, the rational choices made by the burglars in committing their crimes have received much attention from the scholars in the related fields (e.g., Johnson & Bowers, 2010; Bernasco & Nieuwbeerta, 2005; Hearnden & Magill, 2004; Wright & Decker, 1994). The representative studies generally confirmed that burglary is a result of the cost and benefit calculation by the possible offenders. In agreement with the past findings, this study disclosed that the participants had developed a clear conception on what they perceived as a 'suitable target'. Most study subjects seemed to weigh the risks and rewards involved in all instances in which they made a decision in judging the suitability of a possible target. Moreover, they viewed their target selection processes as a rational choice, thus regarding burglary as a reasonable act.

Despite the support from the past research findings, committing burglary should not be considered a completely rational act, because there is no clear evidence to argue that the participants of the researches took into account every other alternatives and different situational factors. Rather, it would be more accurate to state that the subjects in the study sample may have exercised what is designated as 'bounded rationality'. Specifically, it indicates that the decisions of the burglars are typically made on the basis of examining a small number of situational aspects or factors. Besides in the case of the present study, other criminological research, too, has found the concept of 'bounded rationality' useful in helping to explain criminal decision making. In this connection, Walsh (1986), for instance, examined the victim-

selection procedure of economic criminals (including burglars), and in the concluding remarks to his study, he stated,

Reading all the target selection comments from the interviews together, we find that each man mentions rational facts.... Yet closer examination shows that rather than each criminal covering all the points for his crime, considering their target, victim defences, and so on, what is happening is that each man has a bee in his bonnet about particular items and disregards others totally.... The concept we are fumbling for... is perhaps limited, temporal rationality (p.50).

5. Conclusion

Despite the importance of understanding the function of residential target selection by burglars, as part of the broader context of the development of relevant crime prevention strategies, no study has previously attempted to analyse the processes involved in such target selection, and the criteria used to determine such selection, in relation to the Korean context. The present study, therefore, constitutes the first attempt to identify, analyse, and assess the role of the various criteria that, in the context of crime in Korea, burglars use in the selection of their residential burglary targets. Thus, potentially, the findings of the study carry important practical implications for law-enforcement officials and for homeowners.

The most important findings of the study, having far-reaching policy implications, are that offenders conducting residential burglary are, to some extent, rational in their burglary decision making; and that burglars' selection of their residential targets is, for the most part, not random, but rather, is based upon certain identifiable criteria that are related mainly to the features of the residential target. The question that naturally follows from these two major findings is what action can be taken to reduce the attractiveness to burglars, of those residences that constitute their potential burglary targets.

One popular response to this question is that attempts should be made to deter potential residential burglars through the employment of greater legislative and judicial threats or sanctions against them. This response, at least in part, derives from the belief, held by economists and jurists of the classical school that individuals engage in criminal activity because it is profitable. Proponents of the classical school argue, if the risks attached to crime, in terms of the punishment, are increased enough so that such risks would significantly outweigh the anticipated rewards, this could deter criminals. As Cook (1986) argues:

The threat of punishment is, in effect, a government-imposed tax on criminal activity: the higher the tax, the fewer the criminal activities that will be deemed worthwhile by potential criminals (p.81).

The problem with this approach is that many criminals consider punishment for their crime, irrespective of how severe that punishment may be, to represent only a relatively slight, and thus an acceptable, degree of risk when evaluated in comparison to the immediate gains that are derivable from their crime. For these subjects, simply to impose more severe punishment for the offence of burglary, without ensuring certainty of apprehension might, in fact, prove counterproductive, from the point of view of the authorities trying to achieve greater deterrence and prevention. For, by 'upping the stakes' in terms of punishment, the authorities might, inadvertently, increase the excitement and appeal of residential burglary for those offenders, attracted to it, by the opportunity it provides to show off their criminal skills and courage. Current legislative and judicial attempts to deter burglary, in Korea, through increased

punishment take insufficient account of the actual factors and conditions that, in practice, determine burglar decision making.

A more promising approach to the objective of reducing the attractiveness of potential residential targets to burglars, and thereby helping to deter those burglars from selecting the residences in question, in the first place, might be offered through the employment of techniques of physical deterrence. This approach, as Fattah (1976) explains, appears more promising than legislative or judicial deterrence.

There is no doubt that in many of the cases where punishment fails or is likely to fail, as a deterrent, physical deterrence can be an effective means of dissuasion (p.70) Physical deterrents, which render the commission of certain crimes more difficult and less tempting, seem to be more effective in reducing the incidence of these offences than is the threat of punishment (p.100).

This approach to crime deterrence and prevention, employing techniques of physical deterrence, is based on the view that the motivation to criminally offend is, to some extent, determined by environmental factors. In terms of this view, the offender is seen as someone who actively chooses to offend, in response to certain environmental stimuli that are present in the given context of the proposed crime. Consequently, within this approach, to deter potential offenders, the environmental stimuli in question must be reduced or nullified in terms of their effects. That is, the target and its environment must be engineered in such a way, that the commission of the given form of crime in question, becomes difficult or impossible (Jeffery, 1999).

In this study, subjects looked for residential design features that conformed to their description of what constituted a 'good' residential target. Therefore, the attractiveness of any given potential residential burglary target was shown to depend on the immediate characteristics of the target in question as perceived by the subject. A number of such specified characteristics were found to attract subjects to potential targets. However, it is possible, in terms of burglary prevention, to manipulate some of the other features that belong to a potential targeted residence. A potential residential burglary victim could review the list of factors that have been established as constituting significant deterrents against burglary; and then, could introduce any features associated with these factors, in an effort to minimise the risk of the victimisation of that residence.

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Changing Outlook of Turkey-Israel Relations after the Millennium

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Abstract

Turkey-Israel Relations, characterized with strategic alliance throughout the 1990s, underwent a radical change at the post-millennium period. The changing tone of the two countries' relations is mainly the result of Turkey's approach to define the Middle East on the basis of cooperation rather than threat, in parallel to the new Turkish foreign policy strategy. The strategic alliance of Turkey and Israel, built on common threat principle, became meaningless due to Turkey's changing attitude towards the Middle East. However, an improvement in Turkey-Israel Relations might be expected in near future. Israel's acceptance of the apology and compensation conditions stipulated by Turkey after the Gaza Flotilla Raid, although under the influence of the US, gives significant clues about the future of two countries' relations.

Keywords: Middle East, Flotilla Raid, Strategic Alliance, Arab Spring, Problem of Palestine.

Introduction

Turkey and Israel are two countries situated in the Middle East, where Arab population has a dominant demographic superiority, but not based on the Arab identity and culture. Since the Cold War era, these two countries have been the most important Middle Eastern allies of the Euro-Atlantic Alliance. Especially the US has very close political, military and economical ties with these two countries.

These countries policies towards each other become meaningful with the US factor. The US considers Turkey to be a significant power able to overcome the anti-American attitude of the Middle Eastern people, created because of the quarrelsome policy adopted by Israel. In other words, as long as Israel maintains its current foreign policy concept, the US will need and depend on Turkey for building a relationship with the Middle Eastern people. Since Turkey is aware of this need and in parallel to the foreign policy strategy adopted, it might use the alternative of taking a backseat in its relations with Israel. Although US feels uncomfortable with this situation, it chooses not to be very much involved with the tension between Turkey and Israel, since, waves of political and social change observed in the Middle East with the impact of the Arab Spring intensified the dependence on Turkey.

Change in Turkish Foreign Policy

Turkey had a passive approach towards the Middle East during the Cold War. Although ongoing rivalry imposed by the international system and negative aspects recalling last years of the Ottoman Empire play a part in the weak relations between Turkey and the Middle East, we can not deny significant role of the Turkish foreign policymakers. During the Cold War period, Turkey had hesitations about the systemic risks inherent in opening to the neighboring geographies. As a country located on the USSR border, the possibility of struggling with these risks on its own and possibility of contradicting with the Euro-Atlantic Alliance had negative impact on its approach towards the Middle East. One of the most important reasons underlying the Middle Eastern hesitation of Turkey during the Cold War is ideological. After the death of Mustafa Kemal Ataturk, Turkey chose to alienate itself from its surroundings and faced only the West. The assumption was to achieve the “high modernization level” predicted by Ataturk. However, this choice alienated Turkey from its geography although Turkey had crucial advantages in terms of relations with the surrounding and came to point where it could not make use of its potential. But this was not Ataturk’s mistake. During Mustafa Kemal Ataturk’s term, Turkey concluded the Balkan Entente in parallel to the Sa’dabad Pact and Turkey acknowledged that it is a Middle Eastern country. At Ataturk’s term, Turkey also tried to achieve the goal of building relations with neighboring countries.

After the Cold War, Turkey had to have radical changes in terms of its foreign policy. Turkey lost its military outpost function at the USSR border and its foreign policy strategy for the new era was open to discussion. Actually, there were analyses suggesting it would lose its former importance in the new era. Joining systemic foresights of the Euro-Atlantic Alliance and leaning on a passive foreign policy during the Cold War period, Turkey realized in the first half of 1990s that, it should abandon unidimensional foreign policy which gained meaning with NATO membership and adopted EU membership as the sole foreign policy goal. Turkey moved forward by prioritizing establishment of diplomatic, political and economic dependency relations with the newly independent states emerged at the geography left by the USSR, as encouraged by the EU and US, and by discourses envisaging regional leadership; however Turkey failed to have the will to initiate in the Middle East. Actually, we might say that Turkey’s Middle Eastern strategy had a cautious trend because of the Gulf Crisis, PKK Problem and political/regional rivalry with Iran. Undeniable impact of the EU membership

process and political instability caused by coalition governments ruling the country in the 1990s prevented adopting a stable Turkish Foreign Policy.

The major change in Turkish Foreign Policy started at the post-millennium period. Foreign policy is the most important aspect of the political change introduced by AKP; a political party came into power in 2002 and introduced itself as a conservative democrat movement. After the 9/11 and invasions of Afghanistan and Iraq, the Middle East is only associated with collision. Nevertheless this region has become the most important trivet of new Turkish Foreign Policy. Doctrinaire approach of the Turkish Minister of Foreign Affairs, Ahmet Davutoglu, who aims to change regional and global perception of Turkey through good relations to be built with neighboring geographies and by encouraging multidimensionality in foreign policy, enabled Turkish Foreign Policy to associate with the Middle East. The new Turkish Foreign Policy seems to make sense with historical experiences, identity and shared cultural/religious values and to be theorized with societal foresights of the social constructivist theory. Turkey reflects the knowledge and socio-cultural advantages to its immediate surroundings via public diplomacy principles based on its level of social, political and diplomatic capabilities. In other words, Turkey mainly refers to the soft power, highlighted by Nye, when it comes to foreign policy practices. At the intersection point of social constructivism interpreting security in social aspect and soft power theory, Turkey clearly displays the knowledge, power and potential it has. Turkey tries to structure the concept of building interdependency chains, offering an effective theoretical framework to be used for neighboring countries, on economic, technological and commercial superiority it has.

The primary goal of the new Turkish Foreign Policy is to render Turkey an effective regional leader of its geography and a balancing actor having a say on the global course of events. The Middle East has a founding role in this foreign policy approach. The foreign policy strategy adopted towards the Middle East is based on references to the common socio-cultural aspects appealing to the communities and religion which has a crucial role in forming social identities. This policy adopted by Turkey has negative impact on its relations with non-Arab regional actors, like Israel and Iran, which desire securitization of the region within the framework of its own political realities and especially as per the religious/denominational identities. However, at this point, we can see that Turkish Foreign Policy makers tend to see the big picture. Presentation of Turkey as a role model to the other countries in the region evidences that the cooperation associated with the economical power owned and aiming to build interdependency chains effectively gains meaning within the concept of soft power practices when socio-cultural proximity and political system is combined. However, the extent of the influence offered by the foreign policy embraced by Turkey will be better understood during and after the Arab Spring. Network of conflicting relations and systemic polarization introduced by the Arab Spring will reveal the influence of foreign policy strategy based on soft power and mutual interdependency, when hard power is dominant in the region.

Historical Background of Turkey-Israel Relations

Turkey-Israel Relations have been associated with tension several times within the historical process. However, it is evident that the level of tension has increased and has become constant at the post-millennium period. Actually, we should consider the US factor as a founding element while reviewing the relations between these two countries.

Turkey reacted when Israel attacked Egypt, as planned with England and France. Following this attack, Turkey withdrew its ambassador to Tel Aviv in November 1956. However, even reducing the level of diplomatic relations to acting ambassador failed to prevent the continuation of strategic relations coordinated by the US. Six-day War at 1967 also had a

negative impact on Turkey-Israel relations. The attempt to destroy Al-Aqsa Mosque in 1969 triggered a new wave of tension in Turkish-Israeli Relations. Turkey sided with the Arab governments and declared impartiality in 1973 during Yom-Kippur War but, in practice, Turkey supported the Arab governments. It allowed Soviet airplanes carrying weapons to Arab countries to use Turkish airspace but did not allow the US aircrafts supporting Israel to use Incirlik Military Base. Israel's concerns about Turkey were peaked when Turkey recognized the Palestine Liberation Organization (PLO), under the leadership of Yasser Arafat, as the official representative of Palestine in 1975 and authorized the organization to open a representation office in Ankara in 1979. As a response, Israel made Jerusalem its capital city. After this move of Israel, Turkey reduced its diplomatic representation in the country down to second-secretary level.

Actually, we might say that Turkey-Israel Relations were torn between systemic requirements and social response during the Cold War. Turkey, an important member of the Euro-Atlantic Alliance located on the USSR border, had to improve its political, military and economical relationship with the US, the leader of this block. This was a must for ensuring its own security. Whereas Israel is a country almost attached to the US and the security of this country establishes the US' redline in the region. In parallel to this fact, Turkey's attempt to increase the level of relations with Israel up to alliance is an understandable approach. Turkey is a secular country, majority of the population is Muslim and Israel's attacks on Muslim Arabs cause deep indignation in Turkish society. During the Cold War, Turkey had to have strategic cooperation with Israel on certain matters because of the immediate Soviet threat. However, this policy embraced by the government was not validated and embraced by majority of the Turkish society. When the Cold War was over, contrary to the expectations, Turkey-Israel relations had its golden age in the 1990s. The most important reason underlying this golden age is the new threat perception embraced by Turkey on the basis of security and the position of Israel within this concept.

The conceptual framework underlying the cooperation between two countries in 1990s is based on "balance of threat", conceptualized by Stephen Walt rather than the "balance of power" introduced by Kenneth Waltz. As a matter of fact, Turkey-Israel Relations are based on threats caused by the region where the countries are located and managed on the basis of common security. In the post-millennium era, Turkey abandoned the security-oriented approach towards the region and began to see the opportunity of cooperative relations to be established with the actors formerly considered as a threat. Turkey-Israel relations, which had its golden age in the 1990s, obtained a conflict-based structure after this change. However, there are problems about naming the Turkish-Israeli Relations which had its golden age during the 1990s. Although there are comments describing the relationship between these two countries as an alliance, naming the relations between these two countries as an alliance is prevented because the term alliance generally refers to the military issues. As evidenced by the contract concluded on 1996, the military aspect of bilateral relations had a crucial role. However, the relations between these countries can not be described as a military alliance since governments have not concluded a contract on joint defense and form official defense cooperation for battling with countries considered as a common threat. Thus, Turkey-Israel Relations should be considered as strategic cooperation or convergence in the 1990s, rather than strategic alliance. The relations between two countries are never considered as a strategic partnership. Actually, the most important goal of the US and Israel is to shape Turkey-Israel Relations within the framework of strategic partnership. As underlined in 1994 by the Turkish Prime Minister Tansu Çiller, Turkey-Israel Relations were strategic cooperation that based on military, political and economical issues.

Turkey-Israel Relations did not develop throughout the 1990s due to a number of reasons. These reasons are in parallel to the common threat perception and harmonization of interests explained above. The first reason is the détente period between Israel and Palestine which started at the beginning of the 1990s. The second reason is the aim of ensuring support of the Jewish Lobby against Armenian and Greek lobbies especially in the US Congress. The third significant reason is to have Israel's support in the struggle against the PKK and to have a strong ally by its side against Syria and Iran which support PKK. Finally, Turkish governments consider "political Islam" as the most important threat against the current regime and see Israel as a natural ally.

However, we can clearly see that the cooperative attitude dominating the relations is abandoned at the post-millennium period and the relations are transformed into a conflict-based structure. This caused by a number of reasons attributable to both Turkey and Israel.

Turkey-Israel Relations: From Strategic Cooperation to Regional Escalation

Turkey-Israel Relations is generally characterized with tension and conflict at post-millennium era. Al-Aqsa Intifada started in 2000 and Likud, which came into power in 2001 under the leadership of Ariel Sharon, are considered as incident triggering the escalation. Also the rumors suggesting political cooperation between the Kurdish groups in Northern Iraq and Israel engendered Turkish anger and distrust in a period that characterized by discontent caused by Iranian nuclear program. The political tension also peaked when Israel killed Hamas leaders Sheikh Yasin and Abdel Aziz al-Rantissi and then became a diplomatic crisis when Israeli Prime Minister wishing to visit Turkey could not get an appointment. However Turkey realized that it should slightly improve its relations with Israel for the purpose of settling the tension experienced with the US after the Memorandum Crisis, for ensuring the US support for fighting against PKK operations in Northern Iraq, invalidating genocide propaganda made on the US Congress by the Armenian Lobby and especially ensuring the US support in terms of relations with the EU. Turkish Minister of Foreign Affairs' visit to Israel, which followed by Erdogan's visit underlined the importance of the bilateral relations again. Actually, following these visits, Turkey was said to become the intermediary for negotiations between Israel and Syria. However, this cooperative process did not last long. Military operation to Lebanon which orchestrated by Israel to weaken Hezbollah in 2006 had been considered as a threat that trigger the tension in Turkish-Israeli Relations.

Intending to cooperate with its neighboring countries rather than seeing them as a threat and positing Middle East as a practice field due to historical, socio-cultural and religious/denominational similarities; Turkey realized that Israel's threat-based, security-oriented foreign policy approach is not compatible with its interests and restructured the relations with this country on the basis of conflict. The worst period of Turkish-Israeli Relations throughout the history began when Turkey argued against Israel's "Operation Cast Lead" launched in Gaza in December 2008. Turkey's criticism against Israel peaked after "one minute" crisis experienced in January 2009 and Gaza Flotilla Raid on May 31, 2010. At this juncture, Turkish Government's attempt to influence Arab Middle East for becoming a regional actor having a say on global issues is the most important factor. Israeli governments, which do not take an initiative for resolving the Palestinian issue and the attitude intending to intimidate Palestinian actors with violence and suppression, contributed to the break off the relations.

There are a few important factors having an impact on structuring Turkey-Israel relations by escalation. The first factor, as explained above, is the Turkey's foreign policy orchestrated by AKP at the post-millennium period. Turkey structured its relations with Israel in parallel to the common interests and the threat sensed in the 1990s by countries such as Iran,

Syria and Iraq. This reality is combined with Israel's psychosis of being enclosed when it comes to the Arab Middle East. Nevertheless Turkey prioritized Arab Middle East in its new foreign policy paradigm expressed with soft power and mutual interdependence. Accordingly, Turkish approach towards Israel, which associated the Arab entity as an element of political and social hatred and identified with the Palestinian issue, generally manifested itself in the form of negative statements and, if required, by action as seen in Gaza Flotilla Raid. The military operation launched by Israel in 2006 against Hezbollah based in Lebanon is the beginning of this attempt and the aim is to unite Turkey and Arabs on the same platform by using socio-cultural and religious aspects.

AKP, which came into power in 2002, considers itself as a conservative-democrat political party. However, the political approach constituting the basis of AKP was considered to be a threat against the political regime throughout the 1990s. Before AKP, several political parties were terminated or banned based on the threat of political Islam. AKP, which managed to come into power at the post-millennium period, might be considering alienation of Israel as a duty to be performed since Israel is known to be an ally of Turkish governments and power groups during the Islam-oriented witch hunt of 1990s. Actually, this is an accepted view among the party grassroots and voters. AKP considers the strategic cooperation developed with Israel as a product of the tutelage period which must be alienated as "the former Turkey", that can be considered as an improper reflection of popular will at the political arena.

Israel's reluctance to resolve the Problem of Palestine and its hesitation in taking initiative also impaired Turkey's attitude towards Israel. Turkey, which considers the question of Palestine as the most important element at its Middle Eastern initiative, is alienated from Israel because extremist political parties, representing the security-oriented approach against finding a solution launched several military operations in West Bank and Gaza by embracing an attitude disregarding the Palestinian Arabs. Reaction against Operation Cast Lead and Operation Pillar of Cloud and the disagreement Erdogan and Peres had on January 2009 in Davos reveal that Turkey has instrumentalized the Problem of Palestine.

Another reason for defining Turkish-Israeli relations on the basis of conflict is right wing extremist Israeli governments which display their reaction towards the new Middle Eastern policy of Turkey in an uncompromising and offending manner. Turkey's intention to alienate Israel within its own foreign policy paradigm and right wing extremist Israeli parties and leaders intending to preserve their grassroots underlie this approach. Israel left Turkey in a difficult situation with incidents such as "Small Chair Crisis" and "Gaza Flotilla Raid" and thus impaired the systematical perception of Turkey. However, such attitudes of Israel lead Turkey to associate with the Middle East on the basis of unjust treatment. In other words, Turkey chose to reflect the crisis emerged in terms of Israel onto the soft power based policy practices towards the Middle East.

Dispute between the US government and Israel which caused by the Palestine Problem is one of the most important factors influencing the course of Turkey-Israel collision. Obama administration was being left in a difficult position when the Israeli government continued to build new settlements in West Bank and East Jerusalem and launched operations in Gaza. The crisis about the nuclear program of Iran is another aspect that influences US-Israel Relations adversely. Actually US did not consider launching military operations against a government such as Iran because the economical and political turmoil caused by Afghanistan and Iraq operations is evident. Besides, the US intends to be the party settling the Palestine Problem and thus re-establishing its worldwide systemic hegemony, especially in the Middle East. The uncompromising attitude embraced by Israel towards Turkey, a crucial part of the US' Middle

East strategy, actually disturbs Obama Administration since the Arab Spring has brought along wide range of changes in the Middle East and also Syria Crisis has turned into an international issue involving global actors. Whereas Turkey exploits the disagreement between the US and Israel especially about the Middle East and adopts a controlled escalation policy towards Israel without getting a reaction from the US. This improves its social and political legitimacy in the Arab world. Turkey's acceptance as one of the most important reference point in the settlement process by Al Fatah and Hamas is also a crucial factor. The US accepts Turkey as a crucial actor of its Middle Eastern initiative and desires to bring the region in its systematical hegemony by using the social/political legitimacy achieved by Turkey.

Turkey has realized that political parties in Israel have embraced issues such as the question of Palestine, position of Hamas and Iran as issues of national security and thus hopeless that there will be any peaceful change in Israel. Actually, we see that influential parties and leaders of the Israeli policy avoid discussing the peace in the Middle East. In addition to ruling parties Likud (The Consolidation) and Yisrael Beitenu (Israel is our Home); Naftali Bennett and his political party Habayit Hayehudi (The Jewish Home), which demonstrated itself on January 2013 elections, agree with Likud and Yisrael Beitenu on the issues of Palestine and Iran. However Yair Lapid, the leader of Yesh Atid (Future is Possible), which is considered to be the greatest surprise of the elections, did not highlight his foreign policy approach during his election campaign. Lapid knows that Israeli society does not intend to abandon security-oriented approach in terms of foreign policy. Yesh Atid chose to position itself in the center and although it supports two-state solution for the Palestine Problem, it kept its silence about the matter. However Lapid's admiration of the military and his declaration about lack of trust in the Palestinian leadership evidenced that his views are not so different from the foreign policy approaches embraced by Yisrael Beitenu and The Jewish Home. The same applies to the Labor Party (Mifleget HaAvoda HaYisraelit). When Shelly Yachimovich became the leader of the party, the party was expected to change its foreign policy approach with a peaceful and indulgent attitude but now the foreign policy discourse of this party is not very much different from the right winger parties. The regional approach orchestrated by the Israeli politics, based on foreign policy obstructions and refusing to change, has negative impact on Turkey-Israel relations since Turkey has been changing its foreign policy.

Israel has its own reasons for defining relations with Turkey on the basis of conflict. Before the Arab Spring, Turkey's attempts to improve its relations with the Middle Eastern countries, especially with Iran and Syria which are considered as enemies by Israel, up to the level of "model partnership" increased Israel's concerns about being surrounded. These attempts once again underlined that the country is alone in the Middle East. Israel's approach towards Turkey is also under the negative influence of statements made by Turkish officials for the purpose of achieving social and political legitimacy in the eyes of the Middle Eastern societies which are not fond of Israel.

Israel's approach towards Turkey has changed since relations with Al Fatah have improved and the relations with Hamas, which is considered to be a terrorist organization by Israel, are being defined within the concept of alliance. The relations between Turkey and Hamas are so good that Hamas intended to relocate its headquarters after the Arab Spring and Turkey was one of its options. Israel's negative attitude towards Turkey is also triggered since Turkey is one of the countries condemning Israel's Gaza operations fiercely and tries to bring the problem of Jewish settlements in West Bank to the international arena.

Turkey's intention to build direct relations with the US, in other words its desire to eliminate Israel's diplomatic, political and military mediation, also had negative impact on

Israel's attitude toward Turkey. We know that Israel had a crucial role in terms of Turkey-US Relations throughout the 1990s. After the millennium, Turkey tried to change the policy created by Israel and the US, which intends to build strategic cooperation and even strategic alliance between Turkey and Israel. The foreign policy approach of Turkey which aimed defining relations with the surrounding countries on the basis of cooperation weakened Turkish dependency on Israel. This connection refreshed during and after the Iraq War but has entirely taken a backseat when Obama came into power. Obama administration's desire to benefit from Turkey's new foreign policy concept at the midst of developments experienced in the Middle East highly disappointed Israel.

Parties and leaders adopting the security-oriented foreign policy approach in Israel benefit from Turkey's position as the most important international actor criticizing Israeli attacks on West Bank and Gaza. In other words, right wing radicalism building up in Israel reveals Turkey's reaction towards the policies embraced by Israel and also Turkey's attitude towards such policies reinforces the right wing radicalism in Israel. Turkish Prime Minister Recep Tayyip Erdogan's Davos speech about the Israeli government and also his statement considering Zionism as "crime against humanity" contributed to Israel's conflict-based approach towards Turkey.

The situation of Israel in the international arena after the Gaza Flotilla Raid is one of the factors which have negative impact on the country's reflection regarding Turkey. The entire world reacted when Israel launched a military operation on the ships which were carrying "humanitarian aids" to Gaza that killed 9 civilians. In this operation, Israel used military force against a NATO member and thus labeled as a "hostile" country by the Western countries. Turkey's plan to increase global reaction against the "Blockage of Gaza" was successful, despite significant losses. Israel apologized from Turkey on March 2013 due to the insistence of the US and agreed to pay compensation for deaths and injuries suffered during the attack. Therefore Turkey forced Israel to settle the terms imposed by Turkish government. This will have a positive impact on the social/political perception of Turkey in the Middle East.

Israel's negative attitude towards Turkey is also rooted by the negative stance about the ruling party in Turkey. Israel is worried that Turkey has been embracing its Muslim identity and using it as a reference of foreign policy. Israel is aware that the ruling party in Turkey has its grassroots originate from the "political Islam" which was considered as a threat against the regime by the Turkish governments that ruled the country in the 1990s, when Turkey and Israel had a strategic alliance. Israel's approach towards the authorities ruling Turkey is negative. As groups, originating from the political views marginalized in the 1990s with the help of Israel, take an active role in breaking off the strategic alliance. This attitude is also reflected on bilateral relations.

In the post millennium period, Turkey inevitably marginalized Israel regionally because Turkey changed its foreign policy approach and tried to benefit from economic potential of the Middle East by reviewing the region in terms of socio-cultural similarity, common interests and political cooperation rather than seeing the Middle East as a threat. Israel-Turkey Relations are influenced negatively when Turkey chose to take a pragmatist and relatively independent foreign policy into consideration about the regional developments and caring about sophistication rather than embracing the concept to act according to Israel's regional interests.

Concluding Remarks

The new Turkish foreign policy strategy, which has implemented on the basis of socio-cultural ties and, if required, referring to religious elements, is not acceptable for Israel since it formed its relations with Turkey throughout the strategic cooperation based on common threats and interests. Continuous dominance of right wing extremists on Israeli government and discourse based tension triggered between Turkey and Israel bring diplomatic and political relations almost to a dead end.

Middle East geography has the potential to reoffer common grounds to these two countries which will underline the strategic cooperation. Israel's increased concerns about the social and political movements observed after the Arab Spring is an important factor which has an influence on Israel-Turkey relations. Israel might need the political legitimacy earned by Turkey at the Middle East. Syrian Crisis, which involves Russia and Iran as well as being turned into a global puzzle, might require rebuilding of Turkish-Israeli relations. The US might take the initiative of rebuilding the relations between these two countries since Erdogan criticizes Israel more and more rashly. It is clear that Syrian Crisis has become a huge problem involving Russia and Iran. Iran might be involved in Iraq and Lebanon by using Syrian crisis as bait and even a civil war will surface with bloodshed. The political influence on Shiites offers this opportunity to Iran. Since Israel considers Iran as a threat and considering its nuclear program, which Russia and China make space at the UN, the US will need Turkey-Israel cooperation in the Middle East. Therefore it is clear that the Obama Administration will try to end the collision between these two countries.

Barack Obama paid an official visit to Israel on March 2013. Following this visit, Israeli Prime Minister Benjamin Netanyahu apologized from Turkey and announced the payment of necessary compensations imposed by Turkish government following the Gaza Flotilla Raid. This fact indicates that the relations between these two countries will regain its cooperative aspect with the support/pressure of the US. Accordingly, the US is expected to increase pressure on both sides and especially encourage Israel to take initiative for improving its relations with Turkey. When it is evident that Obama Administration is preparing to take new initiative about the problem of Palestine, positive initiatives to be taken by Israel might re-orchestrate Turkish-Israeli Relations toward strategic alliance as before in 1990s.

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Trend of Crime in Ibadan (1999-2008).

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Abstract

The paper examines the trend of crime in Ibadan between 1999 and 2008. The prevalence rate of crime incidence was determined and the future incidence was predicted till 2050. Crime data indicating type and year of occurrence of crime was retrieved from Police record from 1999 to 2008. The Z score of categories of crime recorded for the period of study was calculated for a comparison across categories. Annual incidence of various categories of crime was presented in a table and analysis of variance (ANOVA) was used in verifying the significance of the observed variation in annual incidence of crime. Linear regression analysis was used in verifying the relationship between year and incidence of crime and for prediction of future incidences of crime till 2050. Crime incidence was taken as a quotient of population figure in order to establish the annual prevalence rates in the study area. The study observed an increase in crime trend in Ibadan with crime of acquisition having the highest crime magnitude. Crime incidence of between 238 and 307 occurred per 1000 population in Ibadan within the period of study. The study suggested an overhauling of police mechanisms of crime control and community initiatives.

Key words: crime, incidence, trend,

1. introduction

'Cities are dynamic assemblages with stunning 'humanistic imprints' attracting large population because it is believed to provide employments, access to 'good life' in form of infrastructures which is absent in the countryside and the myth of 'endless opportunities' (Osaghae, 1994; Agbola and Sobanjo, 2001). While serving as facade of opportunities, cities also provides a breeding ground for different types of crimes.

There is dearth of studies on the temporal dimension of crime, though studies on the incidence, types and spatial distribution of crime are fast increasing. Studies on the spatial distribution of crime (otherwise termed geography of crime) conclusively demonstrate that first, there are notable geographical variations in the pattern of crime locations and second, these variations differ in respect to type of crime (Shaw and Mckay, 1942; Aguda, 1994; Mukoro, 1994; Agbola, 1997; Afon, 2001; Agbola, 2002). Some of the available studies on the temporal analysis of crime which is the main preoccupation of this study reveal its trend over the period studied (Omisakin, 1998; Agbola and Sobanjo, 2002). Omisakin (1998) observed an increase in all types of crime categories reported in the Old Oyo State except offense against local acts which were not reported at all. Crime against property, though fluctuating in occurrence constitutes the bulk of crime reported. Similar findings were recorded by Agbola (2002) in a study carried out in Abuja. He observed an astronomical increase in cases of robbery and fraudulent practices between 1999 and 2000. Ahmed (2012) studied the pattern of crime in Osun state between 1985 and 2000 but failed to precisely state whether crime increases or decreases over the period studied. He however used five factors to develop a model for prediction of future crime incidence in Osun state. These factors are: unemployment rate, rural/urban migration syndicate, inadequate number of police, family responsibility/obligation and drug abuse/trafficking.

The trajectory of urban crime considering the trend assumes a confusing pattern. The acid test for the level of crime had been urbanization which is believed to command the state of anomie in urban centres. Theoretical underpinnings and empirical evidences affirmed this (Hafiz, and Muhammad, 2010; Erdal, 2012). This logically put crime as a bye product of urbanization (AntiEssays.com, 2013). To many observers this is valid. Nevertheless, studies in some developed countries of the world show no causative link between the two. Rather if there is going to be a correlation between crime and urbanization it is negative. For example in most American cities record shows a significant decrease in crime magnitude since 1990s (U.S. Department of Justice, 2012) and current crime rates are approximately the same as those of the 1960s (Christopher, 2001).

The imprints of this argument is further seen in studies undertaken within Nigeria urban landscape (Agbola and Sobanjo, 2001; Abodunrin, 2004). Agbola and Sobanjo (2001) observed a significant decrease in the occurrence of crime in Ijebu – Ode between 1993 and 1998. Abodunrin (2004) had similar observation in Ogbomoso where there was a decreasing crime rate (reported crime cases) between 1995 and 2003. With these empirical evidences it could be assumed that there is possibility of other factors joining forces with urbanization to influence crime levels anywhere. This suggests that urbanism while occupying a significant position in the study of criminal activities; urban social life can also be organized differently in diverse countries and locations within the country to discourage incidence of crime.

This is an interesting scenario as well as point of inquisition. If crime increases perpetually without intervention, what will be the spate of development and livability of cities? If crime magnitude can increase then it can decrease by reduction in the same factors underlying its increases. Can there be a point when crime magnitude will be zero? If yes, then

we will have a crime free city at that period of time. Can this be achieved and for how long could this be sustained? Then how livable will cities be thereafter? Livability in cities is ought to be the absence of environmental stressors such as crime. However, some of our cities have recorded various types of crimes that have not only increased overtime but are metamorphosing into new ones hampering the physical, economic and psychological fabric of the city. It could be safely affirmed here that any meaningful and sustainable policies and programmes targeted at curtailing criminal activities; enhancing the livability of the cities and national development in general; must not only consider the socio-economic and physical environmental context within which crime occurs but also its occurrence over a period of time. This is needed realizing the dynamic nature of our society and the increasing advancement in criminal operation and activities. In addition, analysis of trend should enhance simple prediction of the future pattern and designing of policies to forestall incidences. In view of this, the paper seeks to investigate the temporal variation in the occurrence of crime between 1999 and 2008 in Ibadan with a view to determine the prevalence rates of crime and predict future incidences.

2. Study Area

Ibadan is located approximately on longitude $3^{\circ}51'$ East of the Greenwich meridian and latitude $7^{\circ}23'$ North of the equator at a distance of 145 kilometers north east of Lagos. (Ayeni, 1994). Ibadan region is described as an area extending for about 55km from Asejire in the East to Agemo in the West and for about 700km from Iroko in the north to Mamu in the South (Akinola, 1963 cited by Akintola (1994). The city was founded in the 1820s (Mabogunje, 1968). Ibadan enjoys the characteristic West African monsoonal climate marked by distinct seasonal shift in the wind pattern due to its latitudinal location (Oguntoyinbo, 1994). The rainy season is between March and October when the moist maritime south-west monsoon winds blow inland from the Atlantic Ocean. The harmattan period is from December to January. The mean annual rainfall is 1220mm (Udo, 1994).

Ibadan city is one of the Yoruba traditional urban centres whose urbanization predates colonialism. It was believed that the first group of people to inhabit this city comprises of 'fugitives from justice, wild and wicked men expelled from adjacent towns, rebels and robbers' (Bauer, 1954). The town was not founded by this group but by a member of the colonizing group from Ife called Lagelu. As a result of its frontier location, the town became a market for the Ijebus, Egbas and Oyos. This was the first Ibadan, located near Awotan market, at the north-west of the present city very close to the waterworks. It was besieged and destroyed with only Lagelu and his children left as the survivors. When peace returned, Lagelu descended the hill where he and his children hid, and founded the second Ibadan, located a few miles farther south i.e Oja-Iba - the central market of the city. The town became included in the Gbagura province of Egba territory until the inhabitants deserted it during the internecine struggle of the nineteenth century. Thereafter it became a war camp (about 1829) accommodating the allied forces of Ijebu, Ife and Oyo while the Egba refugees moved south to establish Abeokuta in 1830 (Udo, 1994). The town grew and became a major centre of commercial and administrative activities.

Ibadan witnessed a rapid growth in 1946 when it became the headquarter of the defunct Western Region of Nigeria. This brought an influx of many expatriates and Yoruba sub ethnic groups who came to avail themselves of the varying opportunities available in the town (Ayeni, 1994). The city grew from a population size of 200,000 souls in 1890 to 175,000 in 1911, (Mabogunje, 1968 and Ayeni, 1994) and 1,333,659 in 2006 (NPC, 2006). Ibadan is made up of eleven local government areas, out of which five are found in the inner city surrounded by the remaining six local government areas. This comprises of Ibadan North, Ibadan North east

Ibadan, Ibadan North west, Ibadan South east, Ibadan South west, Akinyele, Lagelu, Egbeda, Ona-Ara, Oluyole and Ido. Ibadan is directly connected to many urban centres and their rural hinterland by system of roads, railways and air routes.

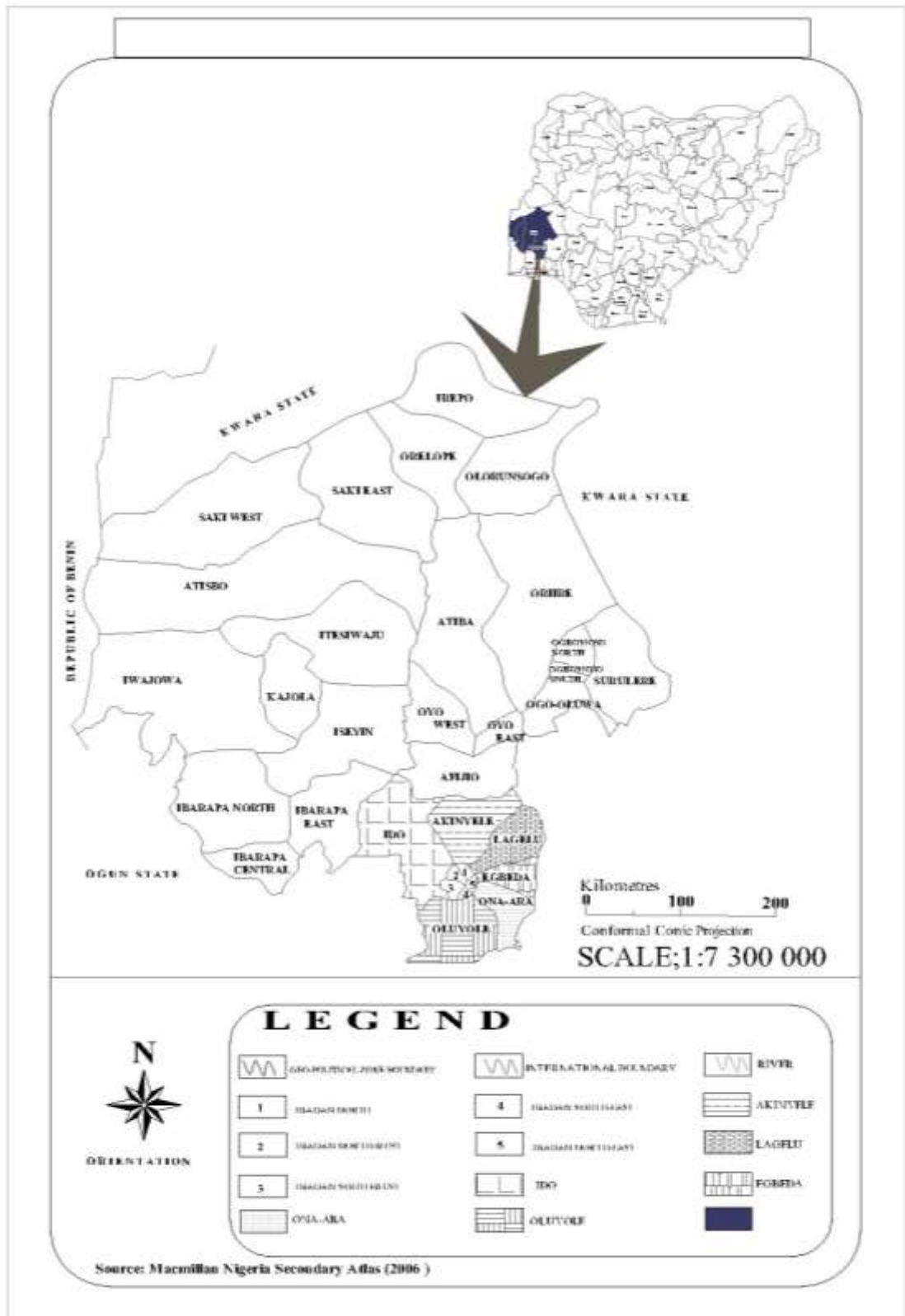


Figure 1: Local Government Area Delineation of Ibadan

3. Research Methodology

The incidence of various categories of crime and the period of occurrence were extracted from police record of 1999 to 2008. It was observed that the police delineation of areas of operation in some cases do not follow the political delineation or city boundary. In Ibadan the two area police headquarters (Iyaganku and Agodi) consist of divisional police headquarters that transcend the boundary of Ibadan. For instance out of the thirty seven divisional police headquarters, five were outside Ibadan city. These include Eruwa, Igboora, Lanlate, Ayete and Kajorepo. Average reported crime cases was calculated by dividing the total crime incidences recorded for the thirty seven divisional police headquarters by thirty seven. The value derived (i.e average) was multiplied by five and deducted from the total crime incidences. This was done in order to eliminate crime incidences for the five towns listed above.

Different types of crime recorded by police were summarized into ten categories. The Z score of categories of crime recorded for the period of study was calculated for a comparison across categories. Annual incidence of various categories of crime was presented in a table and analysis of variance (ANOVA) was used in verifying the significance of the observed variation in annual incidence of crime. Linear regression analysis was used in verifying the relationship between year and incidence of crime and for prediction of future incidences of crime till 2050. Crime incidence was taken as a quotient of population figure in order to establish the annual prevalence rates in the study area.

4. Results and Discussion

4.1 Categories of Crime

For concise and meaningful presentation, the study attempted a categorization of the whole gamut of recorded crime cases. This categorization was done based on lesson from previous studies (Tanumo, 1991; Sullivan, 1996; Omisakin, 1998; and Abodunrin, 2004) coupled with the intuition of the researcher. Crime cases were categorized into ten broad groups (see TABLE 1).

Table 1: Categories of Crime

S/N	Crime Category	Crime Types
1	Crime of acquisition	Armed robbery, robbery, car snatching, theft and other stealing, house breaking, store/shop breaking, school breaking, forcible entry, burglary, gambling, demanding with menace, suspected stolen vehicle, procurement of minor gift, other property related offenses, foreign exchange, cyber crime.
2	Crime of stealth/pretence	False pretence, mischief, cheating, unlawful possession, receiving stolen property, being in possession,
3	Crime of aggression	Murder, attempted murder, manslaughter, kidnapping, child stealing, abduction, homicide, suicide, attempted suicide, slave dealing, threatening violence, and other offenses against persons,
4	Crime of assaults	Grievous harm/wounding, assault occasioning harm, assault, intimidation, intentional insult, deformation of character
5	Crime against morality and custom	Rape, attempt to commit rape, indecent assault, enticing, defilement
6	Crime against property	Arsons, destruction of property, fire incidence
7	Crime of public disorderliness	Breach of peace, affray, public unrest, riot, inciting disturbance, obstruction, trespass, conspiracy/breach of trust
8	White collar crime	Perjury, coining offenses, forgery of currency notes, forgery, bribery, corruption, misappropriation, impersonation, examination/election malpractices
9	Crime against public law and regulations	Escape from lawful custody, resisting arrest
10	Unnatural crime	Unnatural offenses, occultic/witchcraft trial by ordeal, sudden & unnatural death

Source: Author's 2010.

4.2 Annual Reported Crime Categories in Ibadan (1999 - 2008)

In Ibadan, crime of acquisition has the highest incidence followed by assaults, public disorderliness, aggression and or crime against morality and customs as the case may be. In 1999, 2000 and 2002 crime of aggression comes as the fifth leading crime while in the remaining years, crime against morality and custom takes the sixth position (see TABLE 2). With the exception of 1999, white collar crime, and unnatural crime compete for the seventh position. White collar crime rated seventh in 2000, 2005, 2006 and 2007 while this position was occupied by unnatural crime in 2001, 2002, 2003, 2004 and 2008. Crime against traffic acts and other related crimes were not documented as a category in the police record. It is possible that this crime type has been massed with other offenses since sometimes offenses are not committed singly but as complement of other crime type. In Ibadan the least occurring crime category varies annually. While crime against property takes the last position in 2000, crime against public law and order takes the last position in the remaining nine years. This

variation is statistically significant when subjected to ANOVA (F ratio = 447.814, P value = .000, at 0.05 level of significance). This implies that annual incidence of various categories of crime significantly differ from each other in Ibadan within the period of study.

Table 2: Annual Reported Crime Categories in Ibadan (1999-2008)

S/	Crime Category	Year										Total
		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	
1	Crime of acquisition	3283	3387	3527	3060	3432	4007	4001	3235	3505	3557	34994
2	Crime of stealth/pretenc	388	418	787	663	686	897	813	583	788	722	6745
3	Crime of aggression	366	244	68	129	122	70	65	71	77	59	1271
4	Crime of assaults	1246	1396	2081	1986	2405	2350	2066	1717	1893	2022	19162
5	Crime against morality and custom	95	81	102	111	175	120	110	82	79	102	1057
6	Crime against property	6	6	20	11	7	15	9	5	10	18	107
7	Crime of public disorderliness	134	179	386	430	474	539	443	347	405	447	3784
8	White collar crime		11	11	3	20	5	31	20	40	31	
9	Crime against public law and order		7	3	2	2	4	7	3	3	2	33
10	Unnatural crime	1	6	38	23	24	23	22	16	32	41	226
	Total	5519	5735	7023	6418	7347	8030	7567	6079	6832	7001	67551

Source: Author's Compilation from Police Record (2010)

Within the period of study, magnitude of crime categories displayed remarkable variation in Ibadan. The least occurring crime category in Ibadan is crime against public law. Crime of acquisition tops the list followed by crime of assault and stealth/pretence (see TABLE 3). This result indicates that serious attention should be given to causes or factors that provides enabling environment for crime of acquisition i.e getting properties through unlawful means.

Apart from the foregoing, it is equally important to examine the variation in the total magnitude recorded annually in each city as well as the three cities together.

Table 3: Categorical Variation in Reported Crime Cases in the Study Area (1999-2008)

S/N	Crime Category	Ibadan	
		Number	Z score
1	Crime of acquisition	34994	2.44312
2	Crime of stealth/pretence	7228	.03680
3	Crime of aggression	1271	-.47946
4	Crime of assaults	19162	1.07105
5	Crime against morality and custom	1057	-.49801
6	Crime against property	107	-.58034
7	Crime of public disorderliness	3784	-.26167
8	White collar crime	172	-.57471
9	Crime against public law and order	33	-.58675
10	Unnatural crime	226	-.57003
	Total	67551	
	Mean	6755	

Source: Author's Compilation from Police Record (2010)

4.3 Trend and Prevalence Rates of Crime in Ibadan (1999-2008)

Variation in total annual reported crime cases in Ibadan is presented in table 3. The Z score is utilized here to display the deviation in annual reported crime cases from the mean (6755). The highest Z score in the study area corresponds to the peak of crime within the period of study.

Table 3: Trend of Crime in Ibadan (1999-2008)

Year	Crime Incidence in Ibadan	Z score
1999	5519	-1.52509
2000	5735	-1.25859
2001	7023	.33053
2002	6418	-.41591
2003	7347	.73028
2004	8030	1.57296
2005	7567	1.00171
2006	6079	-.83417
2007	6832	.09488
2008	7001	.30339
Total	67551	

Source: Author's Compilation from Police Record (2010)

It is observed that annual crime magnitude in Ibadan reached the highest point in 2004 (see fig 2). Crime incidence rose from 1999 to 2001 after which it retarded then reach the peak in 2004. There was a decline from 2004 to 2006 from where it gradually rose again. The linear

relationship between year and crime magnitude was determined using linear regression analysis. The results show positive r coefficients of 0.462453. This implies increase in crime level in Ibadan. Care must however be exercised in further interpretation of this results because of the irregularities associated with police crime data. These include dark figures (unreported crime cases), grey figures (reported but unrecorded crimes) and manipulation of records to satisfy political and or institutional interest when such is advantageous to regime in power or police force (Alemika and Chuckwuma, 2005). Despite these, police crime statistics remains the only official crime record for the nation and upon which valid conclusions and prediction could be made.

The increasing crime trend in Ibadan is in consonance with the general assertion that crime increases with increasing urbanization and its' inherent tendencies for engendering materialism, stratification, inequality e.t.c. all of which aids or serves as impetus for criminal activities. For instance the study of Agbola (2003) in Abuja revealed that there is an astronomical increase in cases of robbery and fraudulent practices between 1999 and 2000. Crime of robbery and fraud (popularly known as 419) rose respectively from 34 and 24 in 1999 to 64 and 306 in 2000. Increasing crime rate in Abuja was attributed to poverty deriving from marginalization and exclusion, dysfunctional families with uncaring, corruption, drug and women trafficking, social exclusion and discrimination in the supply of urban social services and degradation of the environment among others.

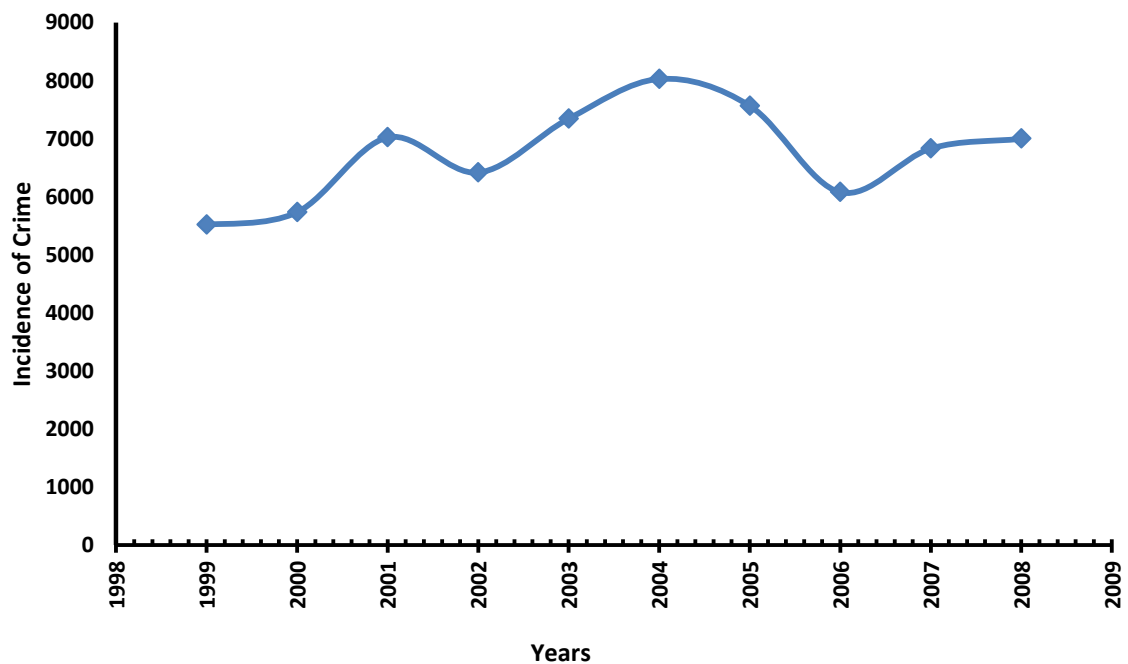


Figure 2: Trend of Crime in Ibadan (1999-2008)

In order to ascertain the prevalence rates of crime in Ibadan the population figure of 1999 to 2005 was predicted from 1991 population census figure using a growth ratio of 2.75 while population size for 2007 and 2008 was projected from 2006 population census figures using a growth ratio of 3.5 (official growth rate, NPC 2006). In order to establish the annual prevalence rates in the study area crime incidence was taken as a quotient of population figure

(see TABLE 4). It is observed that crime incidence of between 238 – 307 occurred per 1000 population in Ibadan. This observation is based on the validity of available data: population figures, growth rate and reported crime data.

Table 4: Prevalence Rates of Crime in Ibadan per 1000 population (1999-2008)

Year	Crime Incidence in Ibadan	Projected Population figures	Prevalence Rates of Crime	Prevalence Rates of Crime (per 1000 population)
1999	5519	2,280,141	0.242	242
2000	5735	2,342,845	0.245	245
2001	7023	2,407,273	0.292	292
2002	6418	2,475,473	0.259	259
2003	7347	2,541,494	0.289	289
2004	8030	2,611,385	0.307	307
2005	7567	2,683,198	0.282	282
2006	6079	2,550,593	0.238	238
2007	6832	2,639,864	0.259	259
2008	7001	2,732,259	0.259	259
Total	67551			

Source: Author’s Compilation from Police Record (2010)

4.4 Predicted Incidence of Crime (2008 – 2050)

This study may not be complete without attempting a prediction of future occurrence of crime based on the observed trend for the period of study. The data collected was subjected to linear regression analysis and a statistical predictive model was generated from the result.

Linear regression equation: $y = a + bx$(1)

where y = future crime incidence

x = year

b = constant

The predictive model generated: $y = -241278 + 123.8x$(2)

The future magnitude of crime is predicted from 2008 to 2050. The result is documented in TABLE 5. Since the 10 years trend shows a consistent increase with time as indicated by positive r coefficient, the predicted values are the linear functions of the distribution. It is assumed that if the rate of crime incidence and level of crime reporting continues as observed between 1999 and 2008, then there is going to be a progressive increase in incidence of crime in Ibadan from 2010 to 2050 (see fig 3). The percentage increase in crime rate in the nation is 78%. This is an alarming rate which calls for urgent intervention from the residents and the government.

Interpreting the predicted prevalence rate in the context of 1000 population indicates that between 2008 and 2050 residents of Ibadan will experience 108 – 258 crime incidences per 1000 population (see TABLE 5). This result assumes a population growth rate of 3.5 and rate of crime reporting recorded between 1999 and 2008.

Table 5: Predicted Crime Magnitude and Prevalence Rates (2008 – 2050)

Year	Predicted Crime Magnitude	Predicted Prevalence Rates	Predicted Prevalent Rates per population
2008	7001	0.256	256
2010	7560	0.258	258
2015	8179	0.235	235
2020	8798	0.213	213
2024	9293	0.196	196
2025	9417	0.192	192
2030	10036	0.172	172
2035	10655	0.154	154
2040	11273	0.137	137
2045	11893	0.122	122
2050	12512	0.108	108

Source: Author's, 2010

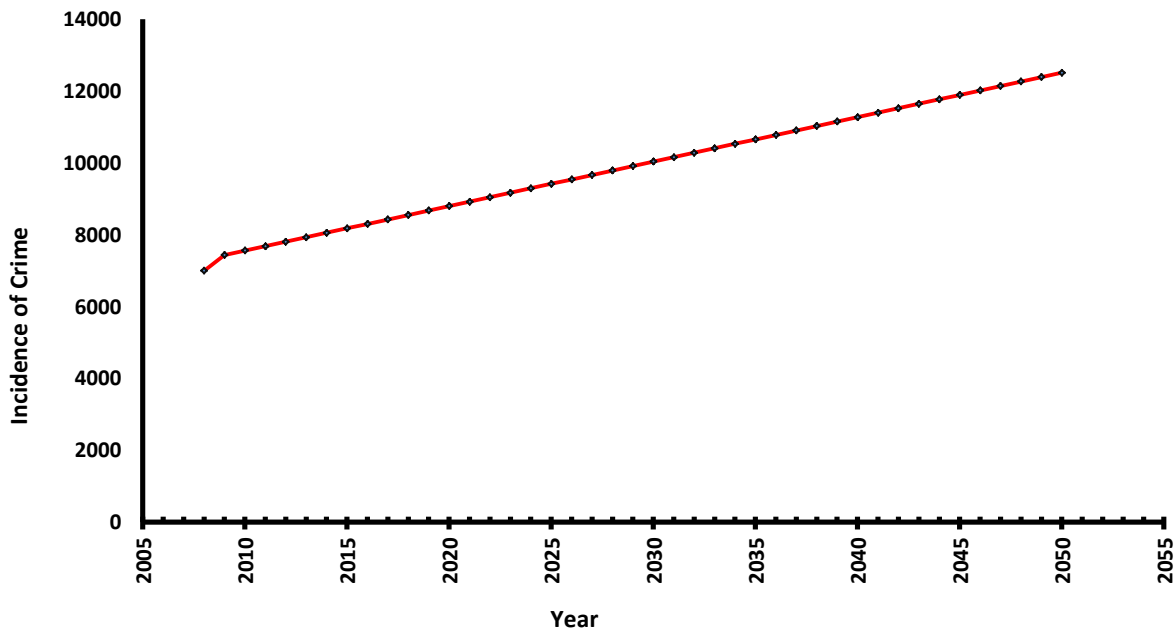


Figure 3: Predicted Crime Trend in Ibadan (2008-2050)

5.0 Conclusion

There is a positive linear relationship between year and crime magnitude (r coefficients of 0.462453). This implies an increase in crime level in Ibadan. Annual crime magnitude in Ibadan reached the highest point in 2004. Crime incidence rose from 1999 to 2001 after which it retarded then reach the peak in 2004. There was a decline from 2004 to 2006 from where it gradually rose again. In Ibadan, crime of acquisition has the highest incidence. It is observed

that crime incidence of between 238 and 307 occurred per 1000 population in Ibadan within the period of study. A predictive model was generated in the study and the crime magnitude was predicted from 2008 to 2050. The study by the analysis of trend has made possible simple extrapolation of the future pattern and expectedly fashioning of policies to pre-empt occurrences, which would then enhance liveability of the cities and national development in general. Future crime study could focus on comparative study of crime trend in other major cities. The study suggested an overhauling of police mechanisms of crime control. Community initiatives of crime prevention and control should be encouraged and adequately empowered for effectiveness. Public enlightenment germane towards improvement in crime reporting to police should be undertaken by the body in charge of security matters in the nation.

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Evaluation of Horizontal Relationship between Geography and Economics Lessons of SSI and SS2 Students in Plateau State, Nigeria

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Abstract

The study focused on evaluating horizontal relationships between Geography and Economics lessons of Senior Secondary 1 & 2 students in Plateau State, Nigeria. A cross – sectional survey research design was used for the study. A random sampling technique was used to select twenty (20) Senior Secondary Schools including government and private secondary schools for the study. From each school selected, one Geography and one Economics teacher were used to collect data, making a total of 40 teachers. On the other hand, twenty (20) students from each secondary school were selected and used for the study (n=400). Data were collected using questionnaires on teachers knowledge on horizontal relationship, student’s identification of horizontal relationship in their lessons and student’s ability to transfer ideas from Geography to Economics and vice versa. One hypothesis was formulated and tested. The result of the study revealed that many teachers particularly from Economics have little or no idea of horizontal relationships in some topics in Geography and Economics. On the other hand, few students were able to identify horizontal relationships in their lessons and were able to transfer such knowledge to increase their understanding of either Economics or Geography. In the light of the above, it was recommended that horizontal relationship between Geography and Economics should be established at the planning stage while conferences, seminars and workshops be organized to create awareness for teachers on the value of horizontal issues between geography and economics.

Introduction

Horizontal relationship is an aspect of curriculum organization that deals with the interrelatedness of ideas, skills and concepts that exist between two or more subjects offered at the same level of schooling. Curriculum can be organized to show two important relationships; vertical and horizontal. Most often, emphasis are laid on vertical relationships while little or no attention is paid to horizontal relationships. The society for Quality Education (S.Q.E), (2011) expressed concern that educators generally think that curricula are being designed from a theoretical perspective. In the past, two basic perspectives were taught in faculties of education; vertically and horizontally organized curricular. However, such courses are increasingly rare or watered down so as to be unrecognizable.

It is lamentable that curriculum planners and implementers are unaware of the importance of horizontal relationships in the senior secondary school curriculum particularly when students are allowed to freely transfer ideas from one subject to the other. Esu, Eukoha and Umoren (2004) categorically stated that when educational experiences are organized to show horizontal relationships, it can produce a cumulative effect. Expressing a similar view on horizontal relationships Eyibe (2006) and Amadi and Obiefuna (2005) stated that students tend to develop a unified horizontal view of the elements of curriculum such as ideas, skills, appreciation, attitudes and values developed across the curriculum in addition students can easily transfer learning from one subject area to another through which can lead to experiences reinforcing each other thereby creating a meaningful learning. It has become very necessary that attention is drawn to what educators see of the school curricula today. It is also important to note that the secondary school curricular in Nigeria are concentrated on vertical relationships which demonstrate relationships between what a child learned in the first, second and third year of school within a particular subject area or discipline. Meanwhile horizontal relationships between what the child learned in one subject and another subject area within the same level (grade) seem to have been neglected or seen as insignificant.

Curriculum planners and teachers who are supposed to help our schools in the achievement of educational aims and objectives, do not seem to plan bearing in mind such relationships and so teachers who implement the curriculum at the class room levels are likely to follow the same pattern. To this extent, some teachers pay little or no attention to horizontal relationships inspite of their knowledge about the existence of the interrelatedness of some topics in their subjects. As a result of that negligence and ignorance on the part of the teachers, the general curriculum is void of emphasis on horizontal relationships hence students cannot establish relationships that may eventually lead to transfer of ideas, skills or concepts between and among subjects taught in school. This can result to what Onwuka (1996) classified as compartmentalized learning. That is, failure of students to have a unified view of the knowledge acquired in the subjects offered in the school at a particular level (grade).

Geography which is seen as one of the oldest and most popular subjects among secondary school students in the past (Damar, 2004) has its content and teaching changed over the years due to the integration of Geography with other science and social sciences. This has negatively affected the popularity of geography among secondary school students. Most often students from the sciences, social sciences or arts describe geography as a subject that borrows ideas, skills and concepts from their disciplines due to its interrelatedness in such concepts with the sciences, Arts and social sciences. Its interrelatedness is seen as it affect other disciplines and are studied in the higher institutions as the branches of geography. These disciplines among others are History, Geography, Economic geography, Biology geography, Statistical Geography, Political geography.

The Canadian Council for Geographic Education (1994) described the relationship between Geography and Economics as being close in areas of location of natural resources, shape of transportation network/technology, industrialization or energy production and trade pattern. It seems that majority of Geography and Economic teachers are not aware of the existing relationship in ideas and as such there is the absence of horizontal relationships in the minds of the teachers. If horizontal relationship is anything to go by, it should be seen that the contents of the senior secondary school Geography and Economics curriculum should relate at the same level of study, enabling both teachers and students to learn it as such. Mkpa and Izuagba (2003) emphasized the enormous contributions of horizontal relationships to the learners as that which help the learners to see knowledge as interrelated (unified) thereby diffusing the artificial barriers that exist between the subjects. On checking the senior secondary school 1 & 2 Geography and Economics curriculum, it was observed that, the contents do not emphasize horizontal relationships. The topics with interrelated ideas were rather organized at the different levels and not on the same level and hence difficult to maintain horizontal relationships. Some topics identified and re-organized to show horizontal relationship in the senior secondary school 1 & 2 Geography curricular: include:

Topics with horizontal relationships in SS 1 Geography and Economics

*The skills of drawing maps and location of places on maps, drawing longitude and latitude lines in Geography. Such skills can be transferred to Economics to draw graphs, charts and tables.

*The ideas of the importance of weather and climate in Geography can be transferred to understand some basic economics problems such as what to produce, for whom to produce.

*Ideas on environmental resource e.g mineral resources in Geography will enhance the understanding of production (factors of production)

*Population distribution in Nigeria in Geography is equally learned in Economics.

*Agriculture, industry and commercial activities in Nigeria in Geography can enhance the understanding of the same agriculture in economics and distributive trade.

Topics with horizontal relationships in Senior Secondary 2 Geography and Economics

*The idea on population and settlement in Geography can enhance a better understanding of demand and supply and labour market.

*Fruit farming, bush fallowing, plantation agriculture, irrigation agriculture and hydroelectric power project in Africa. These ideas can be related to agriculture (2) in Economics.

*The ideas on labour market, public finance, financial institutions, industrialization in Economics can enhance students ability to interpret economics activities of man on topographical maps.

*Other Geography topics for SS2 are related to Economics SS 3 and 1. These are: Transportation, International Economics Cooperation in West Africa (ECOWAS)

Statistical Geography with Basic Economic tools in Economics, international trade, world population, world industrialization among others.

All that is needed here is the cooperation of Geography and Economics teachers to work together and to inform the students about the related ideas and encourage them to freely transfer the ideas to learn either Geography or Economics. Tanner and Tanner (1980) argued that, the achievement of horizontal organization depends solely on the commitment of the teachers, their ability to develop common traits between and among the subjects and their ability to work together effectively. The question is, are teachers aware of this? Are they ready to work together?

The problems being encountered in the teaching and learning of Geography and Economics may be traced to the failure of curriculum planners at the planning stage and teachers at the implementing level to organize Geography and Economics curricular to show horizontal relationships at the different levels of the senior secondary 1 & 2. It was earlier described by S.Q.E. (2011) that its popularity among teachers in recent times are being watered down so that it become unrecognizable. It is hard to deny the existence of related ideas in Geography and Economics. The question is are Geography and Economics teachers aware of the necessity of horizontal relationships in teaching and learning of Geography and Economics? If yes, do they encourage their students to use the ideas where the need arises? It is necessary to note that when horizontal relationships are established between Geography and Economics and among other related subjects taught in the senior secondary school, it will go a long way to avoid what Onwuka (1998) described as compartmentalized learning which means disunity of ideas as students may have a problem of coordinating the different ideas learned from the schools. This is as a result of their inability to freely transfer ideas and skills from one subject area to another. This is because the students were taught to learn in disunity (partly). It is obvious that such ideas can be injurious to the students and our educational system at large.

Purpose of the Study

The purpose of the study was to evaluate horizontal relationship between Geography and Economics lessons of Senior Secondary 1 & 2 students in Plateau State, Nigeria. The aim of the study was to find out the extent to which the daily, weekly and termly lessons taught in Geography and Economics of the senior secondary 1 & 2 classes have horizontal relationships. The study was also to determine the extent to which Geography and Economics students are able to transfer knowledge from one subject area to another. A null hypothesis was formulated that, "There is no significant difference between what Geography and Economics students learn at a given time".

Method and Procedure

A cross-sectional survey research design was adopted for the study. The study constituted all Senior Secondary School (SSS) Geography and Economics students including the teachers in Jos North Local Government Area of Plateau State, Nigeria. Using random sampling technique, twenty (20) Senior Secondary Schools were selected and used for the study. The schools selected were both government and private secondary schools. Two teachers were selected from each school one representing Geography and the other Economics. While SS 1 & 2 Geography and Economics students were selected and used as the sample unit. Forty (n=40) teachers and four hundred (n=400) students for the study. Data were collected through the formation and administration of questionnaires on; horizontal relationships on daily, weekly and termly lessons in Geography and Economics and transfer of ideas from Geography to Economics lessons. A teacher made instrument was developed and used for data collection

which was scrutinized and validated by Senior lecturers in curriculum studies and test and measurement at the University of Jos. The reliability of the instrument was ascertained through test and -retest method. The result obtained from the pilot study were analyzed using coefficient of determination. The result revealed about the strength of the relationship between the first and second results were obtained at 0.8. This implied a very strong reliability and was adopted for the study. The analytical techniques used for analyzing the data were the percentage and chi-square statistics. The percentage which was used to answer the research questions as were presented in the analysis as ‘Yes’ and ‘No’ which represented responses from the questionnaires using the Likert’s four points scale as: Strongly Agree (SA), Agreed (A), Strongly Disagreed (SD) and Disagreed (D). The ‘Yes’ represented ‘SA’ and ‘A’ responses, while the ‘No’ represented ‘D’ and ‘SD’ responses. Chi-square was used to test the hypothesis at alpha 0.05 level of significance.

Below are the analytical presentation of data collected from the questionnaire.

Table 1: Teachers’ responses on identification of topics with Horizontal Relationships in Geography and Economics

Items	Responses	Geo	Percentage (%)	Economics	Percentage (%)
1-11	Yes	100	59	66	25
	No	71	41	203	75
Total		171	100	269	100

Table 2: Students responses on topics with Horizontal relationships as are taught to them by their teachers

Items	Responses	Geo	Percentage (%)	Economics	Percentage (%)
12-15	Yes	397	56	270	30
	No	315	44	618	70
Total		712	100	888	100

Table 3: Students responses on transfer of ideas and skills from Geography to Economics and Vice-versa

Items	Responses	Geo	Percentage (%)	Economics	Percentage (%)
16-20	Yes	413	45	259	24
	No	498	55	830	76
Total		911	100	1089	100

Table 4: Chi-Square calculated on the hypothesis that “there is no significant difference between what students learnt in Geography and Economics in a given time (Reference in Appendix II)

Items	Alpha	Df	Critical x^2	Cal x^2	Decision
12-15	0.05	1	3.84	3.92	Ho rejected

Discussion

Table 1: The analysis of teachers responses on identification of topics with horizontal relationship in Geography and Economics shows that more Geography teachers had knowledge of the existence of horizontal relationship between Geography and Economics than the Economics teachers. Consequently, it is obvious that, Geography teachers do not discuss such

relationship with the Economics teachers. That is the reason why the contents of Geography and Economics do not reflect horizontal relationship. As long as Geography studies some aspects of Economics, the teacher should be free to identify such topics to the Economics teachers if only horizontal relationship is to be established in their daily, weekly or termly lessons.

Table II: This table reflected on students responses on horizontal relationship in the daily, weekly and termly lesson taught by the Geography and Economics teaches. It was observed that Geography students responded more positively than the Economics students on the issue of related topics. Although the relationships may seem not to be on the same level or grade but, then students have the idea on the existing relationship between Geography and Economics. It is rather unfortunate that the students are left alone and not properly guided by their teacher on how to use such important aspect of learning to expand their horizon but were left alone to sort themselves out of the confusion which is unhealthy for any teaching and learning process.

Table III: The analyzed responses of students on transfer of ideas and skills from Geography and Economics and vice-versa showed very low responses for both Geography and Economics students. Which means that student have not established horizontal relationship is all about transferred idea, skills or concepts from one subject area to another. This is because Horizontal relationship is all about transferring ideas, skills or concepts from one subject area to another of the same level or grade.

Table IV: Table four showed the result of the chi-square statistics as the responses of students were being tested. The chi-calculated at 3.92 was more than the critical chi of 3.84. To this extent, the hypothesis that, there is no significant difference between what Geography and Economics students learned at a given time is rejected. It is however assumed that the lessons taught in Geography and Economics at a given time, the student cannot establish horizontal relationship does not exist in the daily, weekly, or termly lessons and if it does, the students have failed to see it and to make use of it as it is against the backdrop to what Esu (2006) opined on how necessary it is to organize learning experiences to show relationship in ideas because such related ideas reinforce each other as the students learnt them coherently.

Recommendations

The following were recommended:

1. The contents of Geography and Economics curricular should be reorganized to establish horizontal relationships.
2. Seminars, workshops and conferences should be organized for teachers to enlighten them on the importance of organizing curriculum to show horizontal relationships.
3. Teachers who are within the same department as the science, arts and social sciences should examine the curricular together and identify areas with horizontal relationships.
4. Teachers whose subjects have horizontal relationships should encourage their students to use the ideas in one subject to solve issues in the other subject. Through that, students can learn the virtue of establishing relationships between and among things in life.

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Appendix I

Research Question 1:

Teacher's responses on identification of topics in Geography and Economics with Horizontal Relationships.

S/No	Statements	SA	A	D	SD
1.	As a teacher, I have never heard about horizontal curriculum organization				
2.	I have convinced myself that geography have related ideas with economics.				
3.	I identified the topics during my lesson planning.				
4.	I kept it to myself alone				
5.	I always mentioned to my students the relatedness of Geography and Economics.				
6.	I encourage students to use ideas from related topics to answer question in Geography or Economics.				
7.	I gained the idea of horizontal curriculum during a conference/seminars because I always in attendance.				
8.	I accessed the idea through the internet in my school about the relatedness of Geography and Economics.				
9.	I cannot access the internet because I'm not computer literate				
10.	Economics and geography curriculum are too wide to be covered				
11.	Economics and Geography Curriculum have unrelated ideas.				

Student's Responses on horizontal relationships between Geography and Economics as are being examined on daily, weekly and termly lessons:

S/No	Statements	SA	A	D	SD
12.	Daily basis				
13.	Weekly basis				
14.	Termly basis				
15.	No relationship in ideas				

Student's Responses on transfer of ideas, skills and concepts from Geography to Economics

S/No	Statements	SA	A	D	SD
16.	I discovered the relatedness of ideas in Geography and Economics				
17.	My teacher told me about the interrelatedness of the ideas between Geography and Economics				
18.	I sometimes use ideas in Geography to answer questions in Economics				
19.	The knowledge of Economics has helped me in understanding difficult concepts in Geography				
20.	The skills I acquired in Economics, I can draw maps and graphs in Geography.				

Appendix II

Chi-Square Statistics for testing the hypothesis

$$\chi^2 = \sum \frac{(F_o - F_e)^2}{F_e}$$

F_e

Using the percentage of students responses on topics with horizontal relationships as were being taught to them by their teachers from table 2 to test the hypothesis.

Item	Responses	Geography	Economics	Total
12-15	Yes	56	30	86
	No	44	70	114
Total		100	100	200

$$F_e = \frac{R_t \times C_t}{G_t}$$

G_t

Where F_e = Expected Frequency

RT = Row Total

C_t = Column Total

G_t = Grand total

$$F_e = \frac{C_1 \times R_1}{G_t} = \frac{86 \times 56}{100} = 48.2$$

$$C_2 = \frac{86 \times 30}{100} = 25.8$$

$$C_3 = \frac{114 \times 44}{100} = 50.2$$

$$C4 = \frac{114 \times 70}{100} = 79.8$$

$$X^2 = \frac{(F_o - F_e)^2}{F_e}$$
$$\therefore \frac{(56-48)^2}{48.2} + \frac{(30-26)^2}{26} + \frac{(44-50)^2}{50} + \frac{(70-80)^2}{80}$$
$$= 1.33 + 0.62 + 0.72 + 1.25$$

$$X^2 = 3.92$$

Alpha 0.05

$$df = (R - 1)(C - 1)$$
$$= (2 - 1)(2 - 1)$$
$$df = (1)(1)$$
$$1$$

$$X^2 \text{ cal} = 3.92$$
$$X^2 \text{ tab} = 3.84$$

Decision: since the calculated chi is more than the critical chi, we reject the hypothesis that there is no significant difference between what Geography and Economics students learned at a given time.

Examination of Copyright Infringement against Outdoor Sculpture in Osun State, Nigeria

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Abstract

The practice of outdoor sculpture in the Southwest of Nigeria is preponderant and varied, scholarship on the art though rich; it is still narrow in scope. For instance, ethic issue in copyright law is barely scratched. Yet the issue continues to generate a lot of social and technical problems; culminating to right deprivation, authorship discrepancy, and a time, outright lost of works and records. Since the problems are time bound and fleeting in occurrence, it is therefore paramount and expedient to critically examine the problems and place it on art historical perspective. This study, basically examines the persistent, flagrant and insidious infringement on artist copyright in Osun State generally, with specific attention on the *Baba Onisekere* and *Yeye Osun* cenotaphs located in Osogbo. The two cenotaphs amongst other have been grossly abused with the right of their artist repugantly trampled. The study further examines the cause of the menace, frequency and implication to the development of public outdoor sculpture in the state.

Keywords:

Abuse, Art Ethic, Copyright, Infringement, Outdoor Sculpture, Quality control, Theme.

Introduction

Outdoor sculpture in Southwestern Nigeria, had witnessed tremendous growth since its emergence in 1934 (Akintonde, 2009). In the first quarter of 20th century it Christians (Odiboh 1987) as environmental adornment within the church. It was also dialectical in scriptural theme for the teaching of the Holy Bible and edification of the church principles. Later, the practice grew in acceptance among the elites and noble men in Lagos. As from 1948, when the colonial government commissioned the bronze statue of *Unknown Soldier* erected at Idumota area of Lagos, the practice grew gradually. By 1990, there was no town in the Southwest that did not use outdoor sculpture for environmental adornment. In the 1991 upward the practice of the art had become greatly proliferated (Akintonde 2009) and since, confronted by multifarious problems.

A major problem, inimical to the healthy practice of the art recently noticed in the Southwest, is the theft of intellectual property also known as copyright infringement. This problem, though new, had gradually become deeply rooted in varying dimensions; starting from the mid-1990s. Earlier known cases of art infringement were mass production of printed matters, processed from the photographs of some outdoor sculptures into art designs used on fabrics and other printed matter such as; vest, tee shirt, face caps, calendar *etcetera* and sold for economic gain without approval from copyright holders of the works. The new art infringement, a partial or total reconstruction of existing outdoor sculptures without consultation with the copyright holder, emerged in 2010.

This aspect is of great art historical value in the main stream contemporary art of Nigeria; since the act, aptly obliterates the contextual and conceptual considerations of the initial works and then imposed another. This act is yet to be properly recorded scholarly until now. In view of the foregoing, this study is based on art infringement, using two occurrences in Osogbo, the State capital of Osun State as examples.

The aspect of art examined is outdoor sculpture erected in the public environment such as; roundabouts “T” junctions, parks and road high-lands. The art is fast growing and it is widely accessible by all public strata. Some of the problem currently observed in the art boarders mainly on unprofessionalism occasioned by the present warped social values in the country. Its manifestation in general practice of the art is observable in poor conceptual planning, misused of icons and technical deficiency, greed on the part of artists, as well as open display of ignorance or blatant disrespect for rule of law by artists and their patrons. The problem can be well assessed on the part of the public in the various abuses they usually committed against art works, while poor quality control and management of the art are obvious on the part of government. All these problems created a poor environment for art in the Southwest of Nigeria (Akintonde 2004 and 2009).

Music and film industries recorded highest number of cases in copyright infringements in Nigeria. Until recently, infringement in visual art, particularly, outdoor sculpture is not much noticed, besides the common range of abuses such as physical assault, appropriation of sculpture sites by traders and lunatics and poor preservation of the sculptures.

The infringement, a civil crime recently committed on the copyright holders of the statues of *Unity* popularly called *Baba Onisekere* (plate 1) and *Yeye Osun* (plate 2) both located at Ayetoro Junction and Dugbe round about in Osogbo, respectively are the main focus of this study. The study examines the copyright infringement generally and discussed the types and the effect on the concept and contextual basis of the statues, as well as the eventual historical adulteration the infringement imposed on the two outdoor sculptures. The study also looked at the underlining factors which prompted the infringement and the eventual peaceful resolution

deployed into the settlement of the cases. Significantly, the study which perhaps, is a pioneering effort in outdoor sculpture copyright infringement in Nigeria brings to fore the oddity in infringements of the outdoor sculptures erected in the public space. It laid emphasis on the art historiography problems that could emanate through the occurrence of such infringements.

There is paucity of scholarly work on art infringement in Nigeria. Much of the available publications on the issue centred on piracy of electronic recorded art, such as; music and film recorded video, VCD and DVD, including books. In the studies, copyright laws, its breach and punishment were discussed. The breach or infringement of copyright law according to Wikipedia (2013) is punishable. Protection of intellectual properties, the publication opines encourage innovation and invention. Hoffman (1992:113-146) and Wikipedia 2013 describes, origin of America copyright law to have started since 1640 and became enacted and known as “statute of Anne” in 1709. It specifies what constitute copyright laws, objects that can be copyrighted and the life span of a copyrighted order of intellectual property. It also states the various sanctions placed on offenders of various copyright laws. Hoffman also added, the public could order for removal of failed outdoor sculpture at will.

Similarly, the Nigerian Copyright Act 1999 and Reproduction Right Society of Nigeria (2004) separately provide similar comprehensive information on copyright laws in the country and appropriate legal actions and sanctions against copyright law violators. The publication defines copyright as “the exclusive right accorded by law to the creator of literary work, composer or artist with regard to the use, reproduction and exploitation of his created works for economic or commercial purposes”. It traces the origin of copyright to 16th century and 1709 copyright Act of America. The publication stated the various amendments made to the copyright Act of 1709 and its similar extension to Nigeria in 1912 being part of the British Empire. Reason for protection of intellectual property, the challenges of copyright protection and some effort made, administration of copyright law were also discussed in the publications. The Development Initiatives Network publication (2007), succinctly provided record to study conducted on infringement of visual art work in Nigeria between October 2006 and observes poor awareness of copyright protection of creative work among Nigeria artists. It also notes the challenges of legal expenses and long process of legal battle which discourage artists from seeking redress for art infringement cases. Adewopo (2002:167-182) in a similar discussion, observer the government lack of political will to back the good policy on protection of intellectual property in Nigeria.

There is no publication yet on outdoor sculpture copyright infringement in Osun State. Apart from the studies of Odiboh (1987) Adelowo (1999) and Akintonde (2004:15-27, 2009 and 2010) on the general study of outdoor sculptures in Southwest of Nigeria, no other scholarly work has been published on the subject. However, all these studies are rich, and helpful.

Copyright Infringement in Art: A Comparative Examination

Art infringement is an unauthorized use of works under copyright (Nigerian Copyright Act 1999). The effect is a deprivation of an exclusive right of copy right owner and a breach or an encroachment of the protective law. Art infringement worldwide is a serious civil offence because of its socio-economic implication on the original owner of creative work, the copyrighted work and the repulsive social impact on the public. The act is fraudulent, wicked and capable of undermining invention and innovation of noble ideas. For this reason, stringent measures have been put in place by the government to check the menace.

In the traditional Yoruba art practice, attitude such as infringement on intellectual property is not a common practice. Although the Yoruba traditional laws were unwritten, they were abide with. In their art, icon and contextualizing of idea are usually similar or the same but no two conceptualizations and executions of ideas are the same. There was also no appropriation of an artist's work by another artist. Any imitations of music or visual art were usually acknowledged. Thus, there was mutual understanding and crisis free environment among the creative intellects in Yoruba traditional art. The Yoruba accords respect and honour to genuine pragmatic and truthfulness in all civic functions they vehemently resist and punished fraudulent acts. For this reason, the traditional Yoruba men discreetly engaged their businesses professionally.

At variance to this, is the moral decadence in modern Nigeria; occasioned by economic hardship, political ineptness and other social vices. These constitute break-down of law and order which in turn undermined professional integrity at all level of human engagements. Cut within the web, the contemporary Nigerian artists also had their fair share out of the conundrum. The result of which amongst other, is art infringement and its complexity on the contemporary art history of Nigeria.

Intellectual Property Protection

Copyright law in America states as follows:

"The copyright law ... encourages the creation of art and culture by rewarding authors and artistes with a set of exclusive rights federal copyrights law grants authors and artist the exclusive right to create derivative works and the right to perform or display their works publicly. These exclusive are subject to a time limit, and generally expire 70 year after the author's death. (Wikipedia 2013a)

Similarly the Nigeria copyright act "provide protection, transfer infringement of a remedy and penalty thereof of the copyright in literary works, musical works, artistic, cinematography films, sound recording, broadcast and other ancillary matters" (Nigeria Copyright Act 1999:4). The act further listed artistic works among others, as work eligible for copyright. It stipulates that artistic work shall not be eligible for copyright unless sufficient effort has been expended on making the work to give it an original character. (Nigeria Copyright Act 1999:4) from the foregoing, outdoor sculpture that have been conceived contextually and technically executed proficiently, justifies its erection in public space under copyright law.

The Nigerian Copyright Act allows art works to be erected in strategic locations in the public environment. The works are to be viewed by the public without hindrance. They are also to be treated with respect because of their historical and aesthetic values as Hoffman noted (1992:113-146). The original artists of outdoor sculpture are also given "exclusive rights" which stipulate consultation with the artists and obtainment of permission on any development on art works under copyright protection. The copyright agency, also oversee the protection, preservation and general maintenance of the outdoor sculptures denotatively by enforcing law against infringement and abuses of public monuments.

The live span of a copyright in Nigeria is seventy years after the death of the author or last of the authors of a joint authorship of an art work copyrighted. (Nigerian Copyright Act, sections 2; 3 and 4). Volunteer groups or cooperate organizations may be allowed by government to maintain outdoor sculptures sites. In Nigeria, commercial Banks and various bottling companies received government approval to use public outdoor sculptures' sites for

veritable product advertisement platform over a period of time. During the period, the organizations would be responsible for the maintenance and preservation of the monuments without tampering with the arts' copyright. Guinness Nigeria Plc has been maintaining the *Awolowo statue* at Allan, Ikeja Lagos and the *Farmer* at Secretariat Junction, Ibadan since 2007. In Ado Ekiti, Wema Bank Plc also maintains outdoor sculpture site. Similarly, the Girls scouts in the USA are used as patch-girls to watch over and maintain outdoor sculpture sites, Trafalgar fountain inclusive (Wikipedia 2013b).

Infringement Act and Control

The relevant aspects of infringement stated by the Nigerian Copyright Act 1999 section 14, sub-section 1, define infringement on copyright object as follows:

“Copyright is infringed by any person who without the license of authorization of the owner of copyright:

1. does or cause any other person to do an act the doing of which is controlled by copyright.
2. exhibits in public any article in respect of which copyright is infringed under paragraph (a) of this subsection.
3. distributes by way of trade, offers for sales, hire or otherwise or for any purpose prejudicial to owner of the copyright, any article in respect of which copyright is infringed under paragraph (a) of this subsection.
4. performs or causes to perform for the purposes of trade or business or as supporting facility to a trade or business, any work in which copyright subsists.”

When any of the stated actions above is committed, an infringement on copyrighted work has been committed, the offender could be prosecuted. The extent of infringement determines the measure of punishment. For, instance, in the case of pirated recorded music or film, the act provides that royalty on all the pirated copies sold shall be paid to the owner of copyright infringed art (Nigerian Copyright Act 1999:37). This connote that monetary gain made from an outdoor sculpture illegally reconstructed must be given to the owner of the copyright. That is the sanction placed on such offender in America. The offender is even asked to further pay damages which include all expenses on the infringement's law suit (Ezekude: 2012). For instance, in 2011 and 2012, two cases on copyright infringement were treated at Kaduna and Abuja High Courts separately. The Kaduna High Court convicted the culprit, on three count charges for six months imprisonment each, which runs concurrently. Added to the imprisonment also is a fine of ₦250,000, proceeds of the pirated musical and film CD and DVD he sold (Bamberger: 1998-2011). In the Abuja case, the offender was asked to refund ₦63,310 the profit he made on the sales of the pirated objects to the copyright owner and sentenced to six months imprisonment.

Types of Copyright Infringement on Outdoor Sculpture in Osun State

The most common infringement in southwest outdoor sculpture practice is general abuse. The abuses are human actions that have negative physical effect on the sculptures. Such abuses are caused by poor management of outdoor sculptures and their environments, inappropriate use of outdoor sculpture, disrespect of the sculptures and the environment, or appropriation of sculptures environment for commercial uses by the public. Fraudulent use of outdoor sculptures by some artists and corporate organizations for economic gains as observed in the Trans Assurance Plc displaying of photographs of *Yeye Osun* and *Iba Oluyole* statues on

the pages of the company's 1996 Calendar without given any credit to the artists who made the two works. Similarly, in Ila-Orangun, a social club printed the photograph of *Ajagunnla* statues on vests and sold to the public in large quantity during the town's Iwa Day Festival of 1995. So many examples like these are many.

Copyright Infringement on Two Outdoor Sculptures in Osogbo

The examples of a major art infringement in Osogbo, is the total/partial reconstruction of two outdoor sculptures. This infringement boarder's squarely on conceptual, contextual basis and technical handling of the works. The two works under study here, are *Baba Onisekere* statue (plate 1) located at Ayetoro Junction and *Yeye Osun* statue (plate 2) located at Old garage round-about. The two works were commissioned in 1991 by Osun State Government. They were produced in 1991. Sometime in 2009, two liquor companies – the Seaman's Schnapps and Eagle Schnapps in collaboration with Osun State Ministry of Environment separately commissioned two artists to renovate the two statues. The artists pretentiously set out to reconstruct the two statues based on the themes and advertisement interest of both companies.

Baba Onisekere and Yeye Osun: the symbolic meaning and Infringement Acts

The two statues produced by Akintonde Moses, were copyrighted along with an academic journal publication; /JAC/: *International Journal of African Culture and Ideas*, Vol. 4. No 1 June, 2004 with ISSN number 1119-9842 duly registered under Nigerian copyright law. The statues with full complement were discussed within pages 15 – 26 of the Journal under the title: "Outdoor Sculpture in Osun State: Emergence and Development" in concept, both works were based on metaphorical representation of unity, peaceful and economic viability nature of the young state. The *Baba Onisekere* (plate 1) is an image of a traditional *Sekere* player (pacution) expressed in realism with subtle short textural strocks. The statue was constructed in motion, mechanically to align with the weight balance correspondingly to the delicate action expressed in the image. The image was portrayed at the height of ecstasy, balancing the *sekere* delicately only on the index finger. This feat is unachievable if all the body parts in spirit soul and body are not in unity, naturally for the purpose. In tandem to this, is the spirit of oneness, metaphorically represented in *Baba Onisekere* statue. The action is a similitude of Osun State patriotic calling, for the development of the young state. The Yoruba proverb *Agbajo owo lafi nsoya* (only in unity can a group achieve success) subsist here. This truism, naturally, is deemed to be a moving force for the advancement of public civic responsibility.

However, the Seaman's Schnapps Company's artist-Gbenga, an architect appropriated the action depicted in the infringed statue as that of one fictitious *alusekere* (a professional *sekere* player) from a nearby town, Ilie who always perform his trade at Ayetoro Junction for traditional rites. He erected of a giant hand holding a Seaman's schnapps bottle and pouring its content on the head of *Unity Statue (Baba Onisekere)*. This expressed pouring of libration on the image to drawn inspiration for excellent performance. The representation, automatically changed the meaning of the statue, adulterated and obliterated the important historical records replete in the original statue (plate3).

This story which of cause is not even the basis of the production of the original work cannot be substantiated. No Osogbo history ever designated that junction for a particular *sekere* man for any special performance. Another artist in the same vein misconstrued the symbolic importance of motherhood as exemplified by *Yeye Osun* statue by designating it to Osun river goddess according to his claim in the sketches prepared for the renovation of the statue. On the receptacle of *Yeye Osun* statue right hand side was a construction of a schematized hand

dripping liquor content. On the left hand side, a giant Eagle schnapps bottle was also erected (plate 4). The two structures were conspicuously placed impairing good viewing of the statue on the one hand and brazenly disturbing the symbolic importance of the work on the other hand.

Yeye Osun statue was made originally to underscore the mother's affection in nation building symbolically. The statue is 210cm in height, representing a middle age woman standing proudly on a circular concrete receptacle. The figure tilted forward a little bit, stretching the right hand in a beckoning gesture. Expressed in realism, it is conceived as a simple Yoruba woman, devoid of any aristocratic or spiritual accolade. The figure was neither portrayed bedecked with *sese-efun* (white small beads) and brass bangle used by Osun priestess and devotees nor accompanied with Osun paraphernalia. Therefore, the figure could not in any way be linked with Osun river goddess. Metaphorical representation of natural and universally belief system in Mother's affection, unbounded by class, position or religion affinity was only employed in the theme of the statue. The aura of motherhood was dispatched to the beckoning hand of the statue, calling people of different lands and climes into the harmonious serene and prosperous young state to form synergy for socio-economic development of Osun State.

Yeye, prefix to *Osun* lexically in Yoruba language, connote aged virtuous mother. It also denote mothers affection irrespective of the age of a woman such virtue resides in. All the accompanying relief representations including, rocks and water fountain are common geographical features, as well as subgroups cultural elements and agricultural produce of Osun State; depicted in pictorial relief on the outer wall of the statue's pedestal. The historical points here are apparent. They are deliberately represented in visual imagery, to educate people and present to the public, to be intrinsically enjoyed as work of enduring aesthetic.

The illegal reconstruction of the two statues was an infringement against the copyright owner. Upon investigation, it was revealed, a contractual agreement was actually signed separately by the artists and the two companies with Osun State Government. The briefs on the commission accompanied by sketches produced for the reconstructions of the two statues were submitted to the Osun State Government for the approval of the projects. The approvals were given, and Fadiora, the Director of Ministry of Environment supervised the project for the government. The State Government was paid certain amount of money for the used of the statues for the advertisement of the companies over a period of time. The "artists" who executed the reconstruction of the statues were also paid large sum of money, while the companies benefited from the advertisement of their products.

Professional Misconduct: Issues from the infringement

To renovate public statues by social organization and corporate bodies is good and, not a new thing. Such projects earlier executed beautifully by Guinness Plc and Wema Bank were in no way injurious to the statues. Renovation of outdoor sculpture however, should be executed under the supervision of competent government agent who should give approval to the appropriateness of the taste and standard of the work of art. In this case, Osun State Capital Territory Development Authority, Ministry of work, (town planning section) or Osun State Environmental Protection Agency was in better position to oversee the work. The purported renovation of *Baba onisekere* and *Yeye Osun* exercises were actually recomposition of the sculptures which invariably affected the land space which is under the control of the town planning. According to Adeagbo, an engineer, the Director of Environmental Protection Agency in the Osun State Ministry of Works, the agency had formally requested for the supervision of the project and necessary approval. Their request was however, turned down.

Fadiora claimed the approvals for the projects were rather given in error by his ministry for being oblivious of the copyright law.

Practically the actions of all the parties involved ran foul of the ethics of intellectual property protection. The action of the artists together with the companies that infringed on the statues of *Baba onisekere* and *Yeye Osun* also violated moral law concerning the authorship of the work. For example, it raises questions on the true author of the works. Is the original artist, the author of the recomposed works? No! Certainly, it will be wrong for him to accept authorship of the reconstructed works he neither, contributed or consented to. The artists of the recomposed works did not also have moral ground to claim authorship of the works. Since they did not have any part played in the making of the original works which are still the principal works. The artists also cannot jointly authored the works, since there was no formal agreement on the conception of the recomposed exercise. Situation like this is capable of undermining the integrity of the true author of such damaged works and the patron. It destroyed the original concept of the works and denied the public the functions of good art works.

The Present State of the Statues

The case of infringement on the two statues were reported by the copyright owner, to Hon. Adio Kaseem, the Commissioner for Environment in Osun State and proved beyond doubt. The commissioner verbally apologized and all parties were summoned to meetings chaired by him on three occasions. The third meeting amicably resolved that all offensive works erected around the statues by the two companies be removed to a considerable distance that cannot affect the original meaning of the works.

One of the offensive sculptures at *Yeye Osun* site – the hand fountain was removed completely before unveiling by Eagle schnapps, while the schinnapps bottle image was relocated to the first enclosure of the statue environment (plate 5). The one at *Baba onisekere* (plate 3) site was yet to be removed before the People's Democratic Party (PDP) Administration of Oyinlola whose tenure the infringements were committed was sacked by court order. The case however, is still being pursued.

Art Ethic Questions

The issue on infringement of visual artist protective rights generally in Nigeria was influenced by unprofessional manner outdoor sculpture production and renovation were usually commissioned. In practice, there should be considerations for capacity and capability on the level of competence in artist who should be given commission. Competition that can provide platform to measure ingenious creative ability is grossly lacking particularly in Osun State. Apart from the Ayo Ojewumi statue commissioned by Irepodun Local Government in 1992 when five artists; Akintonde, Akah Bunak and three other were tested for competency, no such competition is known in Osun State.

Even in the traditional art practice from which the nascent art continually draw inspiration, competent and prodigious artists were known and usually considered for art commission. Sometime, art competition might be organized to select the best artist for a particular commission (Kalilu, 1992). Similarly, in the Euro-American countries, bodies of jurists are selected along side professional artists from disciplines such as architecture, urban and regional planning, engineering, and other allied professions to asses' entries made by artists when competing for public commissions. Usually large entries are allowed to access varieties of expressions and artists' capabilities (Grieder, 1990:5-9). For example, in the case of Vietnam Memorial project competition in USA, 1, 421 designs were entered. Only one, a simple design

of a 27 years old Maya Lii was accepted primarily for onward execution before other images were added.

This type of competition is not practiced by art bodies in the country, particularly the Society for Nigeria Artists (SNA). That notwithstanding, many cases of infringements were often settled out of court. On many occasions artists whose rights were infringed were left without any compensation. Sometimes cases were ignored by artist's whose works were infringed upon. Tiri Oladimeji and Akintonde whose copyrights were infringed in 1975 did not prosecute the offender, even when he confessed to have committed the offence. For instance, the study on art infringement conducted between 2006 and 2007 indicate the poor awareness of copyright laws by the Nigerian artist. Out of the 112 visual artists sampled, 54 of them were not aware of copyright law for creative work. The 58 artists who claimed they know did not even know the copyright regulatory body; 43 of the 112 artists have had their works pirated; only five of the artists sought legal redress. (Development Initiatives Network, 2007: 8 – 12). For this reason, a fertile land had been created for mediocrities in art practice to thrive, at the detriment of highly competent artists who often do not even secured their works under copyright law.

Conclusion

Outdoor sculpture as part of urban development in environmental beautification in Osun state is beginning to assume great dimension. Presently, public outdoor statues located in different towns of Osun State are 39. However, while the acceptability of the practice is gradually accelerating, problem of professional misconduct now being observed in the practice of the art may probably hinder the development.

The new copyright infringements on outdoor sculpture observed in Osun State actually emerged out of greed; incompetence and lack of professional ethics, in the manner outdoor sculptures were commissioned. From observation, violators of copyright law in outdoor sculpture are of two types in Osun State; one, artists of low educational background, two, the general contractors whose understandings in art laws are shallow. They are bereft of basic skill in technical handling of sculpture production, theoretical basis for conception and professional ethics in art. A close examination of the copyright infringement problem, aptly suggest a missing link between extant art practice and the traditional art professionalism. The traditional art and Western art cultures both benevolent of outdoor sculpture; are forthright and consistent in professionalism. For instance, art productions in traditional Yoruba art were usually faithfully contemplated in form and thematic conceptions, rendered in conventional style under strict professional conduct. The professionalism in Yoruba traditional art actually underscores its aesthetic pleasantries encoded in *Iwa* (Abiodun, 1987:63-87), excellent Yoruba daily living, scrupulously employed for enduring results. This is the soul of nobility in human actions. *Iwa* therefore is the baseline of aesthetic in its proper application to art creation and practice, the subsequent fusion is *ewa* (beauty). Beauty, however, in this context, does not only imply outward appearance alone. The correctness of creative technicalities, good conduct of practice, epitomized art beauty in the intrinsic and extrinsic aesthetic realms; strict adherence to the rules, foster mutual understanding and healthy relationship among stake-holders; in art business. This is lacking, in outdoor sculpture practice in Osun State the aftermath is the gradual, insolent contraventions of copyright protective law, on some public outdoor sculptures.

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Plate 1
Akintonde Moses,
Baba Onisekere, 1991



Plate 2
Akintonde Moses,
Yeye Osun, 1991



Plate 3
Recomposed
Baba Onisekere, 2010



Plate 4
Infringed *Yeye Osun Cenotaph*, 2010



Plate 5
The offensive image relocated to the
outer court of *Yeye Osun*, 2010

Health Risks and Safety of Construction Site Workers in Akure, Nigeria.

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Abstract

Construction sites can be busy and hectic with many workers and multiple contractors carrying on different yet simultaneous operations. Trash and debris would pile up to become one large hazardous obstacle making manoeuvring around the site difficult. Although, the overall safety of a construction site is the ultimate responsibility of the general contractor who maintains the site safety plan and communicate its information to all of the subcontractors on site, every worker's responsibility to know and follow the site safety plan, practice good housekeeping, follow recommended work practices, and promptly report and/or correct hazards at the worksite. Most accidents on construction sites are not reported as the main contractors keep these events as secretive as possible either to maximize profit or to keep their names. All of these happen at the expense of the worker who most times are low income earners without health insurance and hardly have enough funds to survive, how much more of paying medical bills. This paper intends to expose the secret behaviours of general or main contractors at concealing the health risks and safety factors associated with workers on construction sites in Akure city in Nigeria. An in-depth study was done on some world renowned sites as methodology so as to expose some hidden truths on how main contractors maltreat ordinary workmen. This paper creates awareness on some health related issues associated with working in the construction environment and solutions were proffered.

Key words: health insurance, safety kits, construction sites, site workers, medical bills, contractors.

Introduction

Construction workers are employed in the construction industry, work predominantly on construction sites, and are typically engaged in aspects of the industry other than design aspects of the aspects or finance. The term includes general construction workers, also referred to as labourers and members of specialist trades such as electricians, carpenters and plumbers.

The construction industry is the most dangerous land based civilian work sector. In European Union, the fatal accident rate is nearly 13 workers per 100,000 as against 5 per 100,000 for the all average sector (Source- http://en.Wikipedia.org/wiki/Construction_site_safety).

ILO's Health and Safety programme (2005), pointed out that the workplace hecatomb of 1.1 million deaths exceeds the average annual deaths from road accidents (999,000), war (502,000), violence (563,000) and HIV/AIDS (312,000). Approximately one-quarter of those deaths result from exposure to hazardous substances which cause such disabling illnesses as cancer and cardiovascular, respiratory and nervous-system disorders. He warned that work-related diseases are expected to double by the year 2020 and that if improvements are not implemented now, exposures today will kill people by the year 2020. In addition, that by conservative estimates workers suffer approximately 250 million occupational accidents and 160 million occupational diseases each year. Deaths and injuries, continue to take a particularly heavy toll in developing countries where large numbers of workers are concentrated in primary and extraction activities such as agriculture, logging, fishing and mining - some of the world's most hazardous industries. Also, according to ILO, some 600,000 lives would be saved every year if available safety practices and appropriate information were used:

- every year, 250 million accidents occur causing absence from work, the equivalent of 685,000 accidents every day, 475 every minute, 8 every second;
- working children suffer 12 million occupational accidents and an estimated 12,000 of them are fatal;
- 3,000 people are killed by work every day, 2 every minute;
- asbestos alone kills more than 100,000 workers every year.

ILO estimates show that the fatality rate in advanced industrialized economies is almost half that of Central and Eastern Europe, China and India. In the Latin America/Caribbean region, the fatality rate is even higher and in the Middle East and Asia (excluding China and India), the fatality rates soar to four-fold of that in the industrialized countries. Selected hazardous jobs can be from 10 to 100 times riskier. Construction sites in developing countries are 10 times more dangerous than in industrialized countries. Industrialized countries have seen a clear decrease of serious injuries as a result of structural changes in the nature of work and real improvements in making the workplace healthier and safer, including improved first aid and emergency care which saves lives in the event of accidents. However the evolving nature of work is generating new occupational hazards, including musculo-skeletal problems, stress and mental problems, asthmatic and allergic reactions and problems caused by exposure to hazardous and carcinogenic agents, such as asbestos, radiation and chemicals. The problem is not that the hazards and risks are unknown, it is that they are very difficult to control in a constantly changing work environment. The two biggest safety hazards on site are falls from height and vehicles, but there are many more (electricity and people being buried while working in excavations being two more examples). Some of the main health hazards on site are asbestos, solvents, noise, cement dust, snake bites, manual handling activities and mostly stepping on nails.

Statement of research problem

The rate of accidents on building construction sites is on the increase on the local scene. The construction industry is termed one of the most dangerous places to work. Most workers at the construction industry are of low income group and are only working for wages to survive. On most occasions, the wages barely see them through the day talk less of the week.

Unfortunately, when accidents occur, most contractors and employers on site pretend not to be aware of such accidents. They conceal information, thereby making recorded cases and statistics difficult. For example, most labourers employed at the construction of the Burj Khalifa-the tallest building in the world were not only underpaid, but most injuries and deaths were never recorded (source-Wikipedia, the free encyclopaedia). There is the need to reduce the rate of accidents on construction sites. This is also a wake-up call for key players in the construction industry to be aware of practices on sites where people get maimed and their health is put at risk without any treatment plan put in place or even compensation benefits paid. The sole aim of this research work is to create awareness and bring to light the hazards labourers experience in the construction industry that puts their health at risk.

Aim

The sole aim of this project is to create awareness and bring to light the hazards labourers experience in the construction industry that puts their health at risk.

Objectives

The objectives set towards achieving the aim above, will be to

1. Gather as much information on accidents at various construction sites,
2. Expose the health risk associated with the construction industry,
3. Bring to limelight the safety factors and procedures to be practiced on site
4. Proffer solutions towards better working conditions of workers on construction site.

Literature Review

Construction accidents

According to ILO report (2005), it says in the construction industry, at least 60,000 people are fatally injured on building sites every year. Many hundreds of thousands more suffer serious injuries and ill-health. In fact, these estimates are conservative. In many countries, less than 20 per cent of construction injuries are reported, and little account is taken of the longer-term impact of occupational diseases. The main causes of fatalities in the sector include falls, fatal crush injuries and the impact of falling objects, and electrocution. Major health problems range from deafness to vibration syndromes, back injuries, other musculoskeletal disorders, and exposure to hazardous substances (solvents, isocyanates, pesticides in timbers, chemical treatments for damp courses, fire retardants, welding fumes) and to dust and fibres (cement dust, silica, wood dust, fibreboard and, worst of all, asbestos). Stress is a frequent problem brought on by the other factors, notably the fear of falling. Construction workers tend to live away from home in substandard accommodation, especially in the developing countries. Tuberculosis, cholera, dengue, malaria and HIV/AIDS can therefore pose particular risks. The global report given by (ILO / WHO, 2005) indicates that about 17 percent of all total workplace accidents occur in the construction sector. This is a very significant number which requires good measures by the stakeholders in the industry to reduce the extent of accident and to make the industry more attractive to job seekers. The research conducted by (Boakye *et al.* 2010) indicated that not all construction accidents are reported by the National Labour Department.

According to Ahasan (2001), the work practices of local workers in many developing African nations are difficult to understand in the context of the proper way of doing things. What leads to good performance varies from a flexible attitude towards Health and Safety to unwillingness to learn or to apply national laws related to H&S. Lubega, Kiggundu, and Tindiwensi, (2000) further conducted research in five districts of Uganda. The group recommended ways for minimising and / or avoiding re-occurrence of accidents which included a review of the existing H&S regulations, enforcement, sensitisation and training. According to the National Occupational Health and Safety Policy (2003) the absence of a consistent national reporting system means that there is no set of figures that reflects accurately the full extent of occupational accidents and diseases these has been supported by the Construction Industry Development Board, (CIDB, 2008) report.

The statistics presented in this review does not separate the statistics into the size of organization. The most complete accident figures are compiled by the Compensation Commissioner. Construction H&S statistics provided by the DoL as cited in CIDB, (2008) report covering the period 2004/2005 to 2007/08 show a sharp rise in accidents up to 2007/08; to around 160 fatalities and around 400 non-fatal accidents (i.e. temporary or permanent disablement). Despite isolated reports of improvement in (2003), there is very limited commitment to comply with basic requirements, let alone promote a culture of H&S. Employers view, H&S as a cost in the system. Small contractors can barely maintain tools and regard safety equipment as luxury items. Even where protective clothing and equipment are provided, workers often avoid their use, including the use of safety goggles and masks when working with grinders and asbestos. Aside from the direct compensation and medical costs associated with accidents the costs to the economy are immense and include rework, lost time, damage to plant and equipment, disruption, productivity loss and loss of skills to the economy (CIDB, 2004). The continuing poor H&S performance of the construction industry in the form of fatalities, injuries, and diseases, the number of large-scale construction accidents, and the general non-participation by key project stakeholders such as clients and designers, provided the catalyst for promulgation of consolidated construction H&S legislation in the form of the Construction Regulations (Smallwood and Haupt, 2005). Teo and Fang (2006) research indicated that players in the construction industry are aware that historic and statistical data do not accurately reflect H&S performance.

The results of their research have shown the importance of leading indicators over lagging indicators to measure construction organizations expected H&S performance. Toole, (2000) studied the responsibility of contractors, subcontractors and designers involved in a project. The study revealed that there was not uniform agreement on the site safety responsibility that should be assumed by each of these groups. Most of the respondents placed responsibility for safety with the contractor. This indicates that the contractor needs to be able to manage health and safety in his projects. In a recent study by Rajendran et al., (2009) they developed a sustainable construction safety rating system using a Delphi method of which literature and an expert panel was used in identifying the essential elements to be used by the project team which included; contractors, designers, owners and subcontractors. The authors identified 50 elements considered essential by experts. These elements were validated on real projects, the results indicated that 26 elements were considered to be mandatory to be used by all the four project team members while 24 were considered to be elective i.e. not mandatory. These elements were categorized into 14 categories i.e.; project team selection, safety and health professionals, safety commitment, safety planning, training and education, safety resources, drug and alcohol program, accident investigation and reporting, employee involvement, safety inspection, safety accountability and performance measurement, industrial

hygiene practices. Sawacha et al., (1999) established that the most important first level factors to improve H&S performance under organization safety policy are: management talk about safety, provision of safety booklets, provision of safety equipment, assuring a tidy site, appointing safety representatives and training of operatives on safety. Aksorn et al., (2008) in a validated study indicated that the critical safety factors identified if emphasized on a project can contribute to a marked improvement of safety performance.

They identified 16 factors/elements included management support, appropriate safety education and training, teamwork, clear and realistic goals these can be termed as policies, effective enforcement scheme, personnel attitude, program evaluation, personal motivation, delegation of authority and responsibility, appropriate supervision, safety equipment acquisition and maintenance, good communication, sufficient resources allocation, positive group norms and personnel competency. The factors were later categorized into four major dimensions namely; worker involvement, safety prevention and control system, safety arrangement and management commitment. . Jaselskis et al., (1996) indicated to achieve better construction safety performance at company level the related factors/elements are; upper management support, time devoted to safety issues for company safety coordinator, number of informal safety inspections, made by the company coordinator, meetings with field safety representatives and craft workers, length and detail of company safety program, safety training for new foremen and safety coordinators, the authors also indicated that at project level, the factors/elements that are important for achieving better safety performance; increased project manager experience level, more supportive upper management attitude towards safety, reduced project team turnover, increased time devoted to safety representative, more formal meetings with supervisors and specialty contractors, more informal safety meetings with supervisors, a greater number of informal site safety.

Hazards to construction workers

Construction accidents are the third most likely cause of work-related injury, after mining and agriculture. ILO (2005). For every 100,000 workers in the construction industry, 15 die due to construction accidents each year. Some common causes of construction accident reports include faulty scaffolding, falls from heights, motor vehicle accidents, carbon monoxide poisoning due to faulty gas mechanisms, forklift accidents, electrocution, machinery accidents, and injury due to falling objects. The leading safety hazards on site are falls from height, motor vehicle crashes, excavation accidents, electrocution, machines, and being struck by falling objects. Some of the main health hazards on site are asbestos, solvents, noise, and manual handling activities.

Falls from heights is the leading cause of injury in the construction industry. In the OSHA (Occupational Safety and Health Association) Handbook, fall protection is needed in areas and activities that include, but are not limited to: ramps, runways, and other walkways; excavations; hoist areas; holes; formwork; leading edge work; unprotected sides and edges; overhand bricklaying and related work; roofing; precast erection; wall openings; residential construction; and other walking/working surfaces.

Types of Construction Injury

A high proportion of construction injuries are caused by falls from height or by objects falling and landing on construction workers. Moving machinery, vehicles and electrical shocks and burns are other construction injuries being reported annually in the UK. HSE (2011)

Some of the types of construction injuries leading to successful personal injury accidents claims include: Cranes, Forklift Truck Accidents, construction Accidents Falls,

hazardous Material claims, construction Injuries Involving Moving Loads and Materials, construction Injuries Resulting From Vehicle Collisions, slips and Trips and Falls, fatal Construction Accidents

Construction sites by their nature involve potentially dangerous tools: scaffolding, off-the-ground structures, high buildings, heavy machinery and equipment, toxic materials and explosive chemicals, power tools including saws, hammers, nails and drills as well as excessive noise, dust and other potentially toxic emissions. Construction injuries can include being crushed by materials, vehicles and machinery, back injuries, gashes, cuts, breaks and fractures, being struck by falling objects, tool and equipment injuries- the list is endless.

Potentially serious construction accidents resulting in injury include but not limited to: falling Object Accidents, explosions and Fires, welding Accidents, flooring Hole Accidents, bulldozer Accidents, trench Collapse Injuries, scaffolding, Ladder or Roofing Accidents, electrical Shock Accidents, boiler Accidents, caulking Accidents, compressor Accidents, building and Structural Collapses. Many of these types of accidents can be avoided via effective training and injury prevention management, safety warning signs, the correct injury protection equipment and clothes.

The Health and Safety Situation in the UK Construction Industry

As part of an effort to improve health and safety of construction industry of the UK and to reduce injuries and related problems resulting from accidents, the government has focused on revising legislations. Taking Construction (Design and Management) Regulations 1994 (CDM 94) for example after it came into force in 1995, the regulations have been amended a number of times by regulations such as the management of health and safety at work regulations 1999, the construction (health, safety and welfare) regulations 1996 and the construction (design and management) (amendment) regulations 2000. These successive amendments came as a result of health and safety commission commitment to maintain the health and safety of construction workers and the general public. (Hackett *et al*, 2007). The current legislation as revised was the Construction (Design and Management) Regulations 1994 (CDM 1994) which came into force in March 1995. The construction (Design and Management) Regulations 2007(CDM 2007) and its approved code of practice came to replace CDM 1994. This new regulations seeks to involve and place duties on all the stakeholders in the industry including clients, designers (Architects and Engineers) contractors (principal contractors, sub-contractors and suppliers), users of the building or the facility and the CDM Co-ordinator in case of (notifiable project – a notifiable project is one where the construction work is likely to take more than 30 days or involve more than 500 person days).

Pre-Construction Information – It is the client's duty under the new regulations to provide the pre-production information. This information should reach designers and contractors who may be bidding for the work. The pre-production information covers project-specific health and safety information needed to identify hazards and risks associated with the design and construction work.

Construction Phase Health and Safety Plan - The regulations require the principal contractor to produce a construction phase health and safety plan outlining the key arrangements to ensure that the work is carried out safely. Clients need to ensure that adequate plan is in place before allowing work to start on site. In addition, the principal contractor is required to work with contractors to identify the hazards and assess the risks related to their work, including the risks they may create for others.

Health and Safety File - The CDM Co-ordinator also under the regulation is required to prepare Health and Safety file for (notifiable projects – a notifiable project is one where the construction work is likely to take more than 30 days or involve more than 500 person days) only. The file should contain information needed to allow future construction work including cleaning, maintenance, alterations, refurbishment and demolition to be carried out safely. Information in the file should alert those carrying out such work to risks and should help them to decide how to work safely. Responsibilities of other duty holders as given by CDM 2007 and ACoP are too detailed to be considered in this paper.

The introduction of the new health and safety regulations including Corporate Manslaughter and Corporate Homicide Act (Act 2008) which implicates the whole organization in the case of the death of an employee on a construction site might contribute to the reduction of accident rates in the UK. According to Johnson (2010) there were 41 fatal injuries of the whole UK construction industry in 2009/10 (2 per 100,000) and represents a reduction of 37% which compared against the average 3.2 per 100,000 for the previous five years.

The Health and Safety Situation in the Nigerian Construction Industry

Galbraith (1989) and Fellows et al. (2004) opine that OHS regulations on construction have their origin from the United Kingdom. In Nigeria, almost all existing regulations on OHS originated from foreign countries (Idoro, 2004). The existing Factory Act of 1990 in Nigeria is an adaptation of the UK Factory Act of 1961. The Occupation Safety and Health Act of 1970 is an American regulation. The Control of Substances Hazardous to Health Regulations of 1988; the Personal Protective Equipment at Work Regulations of 1992; the Management of Health and Safety at Work Regulations of 1999 are all British regulations and are applicable in European countries. The Manual Handling Operations Regulations of 1992 and the Construction Design and Management (CDM) Regulations of 2007 are also UK regulations. Apart from the Factory Act of 1994 which was enacted by the legislative arm of the Nigerian Government, all the other OHS regulations existing in European and other foreign countries are yet to have Nigerian versions.

The term PPE describes any device or appliance designed to be worn or held by an individual for protection against one or more OHS hazards (HMSO, 2002). Two notable regulations namely: Factory Act of 1990 and the Personal Protective Equipment (PPE) Regulations of 2002 are specifically concerned with regulating the use of PPE. The Factory Act of 1990 is the Nigerian version of the Factory Act of Britain. It was enacted and came into force in 1990. Articles 47 and 48 contain regulations on the provision of PPE for workers. The provisions of the Act do not apply to the construction industry because the provisions of Article 87 defines a factory to include premises in which articles are made or prepared incidentally to the carrying on of building operations or works of engineering construction, not being premises in which such operations or works are being carried on (Federal Government of Nigeria, 1990). By this provision, construction site and the activities therein are excluded from the coverage of the Act. The PPE regulation of 2002 is a Directive of the European Communities, which came into force on 15th May 2002. The Directive revoked four others before it namely: the PPE (EC Directive) 1992 and its amendments of 1993, 1994 and 1996. It applies in the member states of European Union (HMSO, 2002). The Directive is only a reference document in Nigeria because a Nigerian version does not exist. The provisions of the Directive deal mostly with the design and manufacture of PPE but they do not specifically cover construction activities (Idoro, 2007b).

The implication of the provisions of the Factory Act of 1990 and the PPE (EC Directive) of 1992 reviewed above is that construction sites and their operations are excluded in the existing OHS regulations. The efforts of construction contractors and workers on the provision and use of PPE are therefore unregulated.

Construction accidents statistics: alarming fatality and injury rates

The construction industry is one of the most dangerous industries in the UK with alarming death rates each year. Construction has the largest number of fatal injuries of the main industry groups in the UK however the rate of fatal injuries in construction over the past decade is starting to show a general downward trend (source-[wikipaedia-2010](#))

Between – April 2009 and March 2010 – 41 workers suffered fatal injuries in the UK, a rate of two deaths per 100,000 workers, down slightly from 2.4 fatal injuries per 100,000 construction workers the previous year. Of the 41 construction workers suffering fatal injury during this period 29 workers were employed and 12 workers were self employed construction workers. Four members of the public were also killed in accidents connected to construction sites and construction work. Since 1999 the rate of reported major injuries to employees in the construction industry has fallen steadily. Despite this falling trend, the rate of major injury in construction is the highest of any main industry group. In some cases, construction injury claims have led to substantial compensation settlements.

Summary of statistics for 2009/2010

- The provisional figure for the number of workers fatally injured in 2009/2010 is 152, and corresponds to a rate of fatal injury of 0.5 per 100,000 workers.
- The rate of fatal injury for 2009/10 represents a statistically significant decrease compared to the average rate for the previous five years.
- Given that these statistics are based on a count of events that are rare, they are highly subjected to chance variation from one year to the next. Therefore, when seeking to use the to make inferences about changes in the inherent dangerousness of work conditions, it is necessary to look at trends over a number of years. The incorporation of the 2009/10 data into the time series reinforces an underlying downward trend.
- The figure of 152 worker deaths is 31% lower than the for the past five years (220). In terms of the rate of fatal injuries, the latest figure of 0.5 per 100,000 workers is 30% lower than the five-year average rate of 0.7.
- Eurostat have made a comparison of the fatal injury across EU countries. This reveals that the fatal injury rate for Great Britain is consistently one of the lowest in Europe.

There were 70 members of the public fatally injured in accidents connected to work in 2009/10 (source-[wikipaedia- 2011](#)).

Comparison of Worker fatalities by main industry

- In agriculture, there were 38 fatal injuries in 2009/10 with a corresponding rate of 8.0 deaths per 100,000 workers. This compares to a rate of 8.3 when an average of the previous five years was examined. Thus the rate for 2009/10 is 4% below the average for the previous five years.

- In construction, there were 42 fatal injuries, with a rate of 2.2 deaths per 100,000 workers. This compares to an average rate of 3.2 for the previous five years. Thus the rate for 2009/10 is 32% below the average for the previous five years.
- In manufacturing, there were 25 fatal injuries, with a rate of 0.9 deaths per 100,000 workers. This compares to an average of 1.2 for the previous five years. Thus the rate for 2009/10 is 24% below the average of the previous five years.
- In the services, sector there were 41 fatalities. With a rate of 0.2 deaths per 100,000 workers. This compares to an average rate of 0.3 for the previous five years. Thus the rate for 2009/10 is 43% below the previous five years.

This total has been revised following changes to the fatality count that have come to light since the statistical release in June, namely, the inclusion of two additional fatalities to employees, and the removal of one fatality to a self-employed person. The net effect which is the fatality count for workers has increased to 152.

Injuries during the construction of Burj Khalifa, Dubai

On 17 June 2008, there were 7,500 skilled workers employed in the construction of Burj Khalifa. Burj Khalifa was built primarily by workers from South Asia. Press reports indicated in 2006 that skilled carpenters at the site earned UK£4.34 a day, and labourers earned UK£2.84. According to a BBC investigation and a Human Rights Watch report, the workers were housed in abysmal conditions, their pay was often withheld, their passports were confiscated by their employers, and they were working in hazardous conditions that resulted in an apparently high number of deaths and injuries on site. Because workplace injury and fatality in the UAE is “poorly documented,” the numbers of workers killed in construction of the Burj Khalifa is unknown (Source-<http://www.theburjkhalifa.com/Wikipedia.html>)

On 21 March 2006, about 2,500 workers, who were upset over buses that were delayed for the end of their shifts, protested, damaging cars, offices, computers, and construction equipment. A Dubai Interior Ministry official said the rioters caused almost UK£500,000 in damage. Most of the workers involved in the riot returned the following day but refused to work.

Construction Accident Deaths Drop In New York

Construction accidents dropped in the city of New York according to recent statistics, however the number of construction accidents and injuries is on the rise in 2009 (Charles, James, 2006)

The building boom, which has dominated New York in the last 10 years, had dwindled, which has contributed to the decrease in the number of construction-related deaths. The death rate decrease is the lowest rate in four years- only three deaths occur in 2009 compared to 19 in 2008, an 85 percent drop, 12 in 2007 and 18 in 2006.

Many have credited the drop to an overhaul on safety procedures, including increased oversight and additional enforcement. Unfortunately, the number of reported construction accidents rose in 2009, despite the drop in number of new building permits. Reported injuries jumped from 246 from 178. More accurate reports from contractors is credited for the jump in the number of construction accidents and injuries, according to the New York Buildings Department.

Two of the three deaths were result of the lack of required safety harnesses. Reliable harnesses are a vital necessity as falls are the largest contributing factor for a construction injury. Additional injuries can be caused by trench collapses, exposure to toxic chemicals, overexertion, and injury due to defective equipment.

Because many construction-related deaths are to the lack of proper use of safety restraints or due to contractor negligence, many of these preventable injuries or deaths have caused those affected to seek legal counsel from an experienced construction accident lawyer.

The National Institute for Occupational Safety and Health (NIOSH) reported that the highest number of work-related fatalities occurred among construction workers due to construction site accidents. At least one out of every 10 construction workers will be involved in a construction injury of some sort each year. Although many minor accidents are not reported, more accurate reports nationwide have officials a more accurate picture of the risks associated with construction sites (source-[HSE 2011](#))

The decrease in the number of deaths is promising; however the injury increase has many concerned. Construction workers between the ages of 25 and 34 are most likely to be injured in construction accidents. Non-fatal accidents can include broken bones, burns and head injuries.

Many construction injuries are severe enough to prevent a worker from returning to work.

Safety on the job site is the responsibility of both construction workers and employers. Adhering to safety guidelines and regulations ensure the safety of all workers on a construction site.

Current campaigns

HSE (Health and Safety Executives) run regular campaigns to raise awareness of issues relevant to the construction industry.

Such current campaigns include:

- ❖ Developing property, 2009 – Targeting property developers with the aim of increasing their awareness of their responsibility as construction clients under the Construction Design Management Regulations 2007.
- ❖ Shattered lives, 2009 – Preventing slips, trips and falls in workplace.
- ❖ Asbestos: The hidden killer, 2009 – Raising awareness amongst tradesmen that they are at risk from exposure to asbestos.
- ❖ European Campaign on Risk Assessment – A two year focussing on risk assessment, aimed at employers, workers, safety representatives and other stakeholders.
- ❖ World Day for Safety and Health at Work- 28 April is the International Commemoration Day for Dead and Injured Workers organized worldwide by the trade union movement since 1996. April 28th is marked every year to draw attention to the plight of workers in Nigeria with regards to health, safety and now security; and together with other Stakeholders in the world of work share thoughts on issues, challenges, concerns and way forward with regards to the promotion of a safe, healthy and secured workplace.

Methodology

In the last five years, ten out of 46 Contractors in FUTA have been more active and most consistent in construction activities, be it new constructions or renovations. Others have also been consistent in supplies and landscaping projects. Ten of these Contractors responded to questions from administered questionnaires so as to extract information on health risks and safety of workers on their construction sites. Information gathered were of both primary and secondary mode of data collection, which included sourcing for excerpts through the internet, journals and conference proceedings. Interviews were also conducted with relevant stakeholders so as to gather further information from them also, and direct observation of attitudes of both contractors and workers on site with regards to safe and unsafe practices. All data were gathered and analyzed and inferences or deductions were made from them. The names of the contractors were intentionally omitted so as to protect their identity.

Table 1: Summary of responses to questions on the personality of the ten contractors

	a	b	c	d	e	f	g	h	i	j	Total	Scorex
Profession of respondent ?												
(a) Building Contractor		1	1		1		1		1	1	6	66%
(b) Roads contractor										1	1	11%
(c) Supplies and Installation contractor	1							1			2	22%
(d) Landscaping Contractor				1		1					2	22%
(e) others (specify).....												-
Age group of respondent.												
(a) 18-25											-	-
(b) 26-35			1	1	1						3	30%
(c) 36-45	1	1						1		1	4	40%
(d) 46-55							1		1		2	20%
(e) 55 and Above						1					1	10%
3. years of experience of respondent.												
A.0-5				1	1			1			3	30%
B. 6-10		1	1								2	20%
C. 11-15										1	1	10%
D. 16-20	1					1	1		1		4	40%
(e). 21 and above											-	-
4. Academic qualification of respondent												
(a) HND											-	-
(b) B.Sc											-	-
(c) PGD	1	1	1	1	1		1	1	1	1	9	90%
(d) M.Sc											-	-
(e) Ph. D						1					1	10%
5. What is the nature of your project?												
(a) Building Construction		1	1		1	1			1	1	6	78%
(b) Road construction	1									1	2	26%
(c) Landscaping and external works				1		1	1				3	39%
(d) Rehabilitaion works										1	1	13%
(e) Others (specify).....								1			1	13%

6. What is the estimated project cost? (a) less than N1 M (b) 1M – 5M (c) 5M- 10M (d) 11M-15M (e) 16M and Above	1	1	1	1	1	1	1	1	1	1	1	9	- - 1 - 9	- - 10% - 90%
What is your staff strength? (a) Less than 10 People (b) Between 10 and 20 People (c) Between 20 and 30 People (d) Between 30 and 40 People (e) 40 People and above	1	1	1	1	1	1	1	1	1	1	1	2	5 1 2	20% 50% 10% 20%

Table 2: Summary of responses to questions on Health and Safety Issues from the ten contractors

	a	b	c	d	e	f	g	h	i	j	Total	Score
1. which of these safety kits does your firm provide for its workers? (a) Crash Helmets (b) Safety Boots (c) Hand Gloves (d) Nose masks/ Safety Eye goggles (e) Others (specify).....			1		1	1	1		1	1	2 4 5 2 -	26% 52% 65% 26% -
Which of these injuries has any of your construction workers sustained during the project? (a) Nail injuries (b) Strained muscles (c) Inhaled substances (d) Weight fall on worker (e) Others (specify).....		1	1		1			1		1	4 3 2 2 2	56% 42% 28% 28% 28%
What is the commonest source of injury for construction workers on your site? (a) Snake bites (b) Stepping on nails (c) Tripping of balance (d) Falling from scaffold (e) Others (specify).....	1	1	1		1		1	1	1	1	1 5 3 2 3	14% 70% 42% 28% 42%
How often are injuries reported on your site? Daily (b)once a week (c) once in two weeks (d) once in a month (e) Others (specify).....				1	1		1		1		- - - 4	- - - -

	1	1	1			1		1		1	6	40% 60%
What items are in your first aid box if you have one?												
(a) iodine	1	1	1		1	1	1		1	1	8	184%
(b) paracetamol	1	1	1			1				1	5	115%
(c) bandage	1	1	1			1				1	5	115%
(d) cleansing spirit	1	1	1			1				1	5	115%
(e) Others (specify).....												
how many of your construction site workers are on medical insurance?												
(a) None	1	1	1	1	1	1		1		1	8	80%
(b) 1-5 Persons											-	-
(c) 6-10 Persons							1		1		2	20%
(d) 11-15 Persons											-	-
(e) Others (specify).....											-	-
How many injured staff records do you have per project?												
(a) Less than 5 People	1	1	1	1	1	1	1	1	1	1	9	90%
(b) Between 5 and 10 People										1	1	10%
(c) Between 10 and 15 People											-	-
(d) Between 15 and 20 People											-	-
(e) 20 People and above											-	-

	a	b	c	d	e	f	g	h	i	j	Total	Score
Who treats an injured worker on your site when the need arises?												
(a) a staff doctor on site							1		1		-	-
(b) a staff nurse on site											2	20%
(c) the injured staff is taken to a health clinic	1	1			1	1		1		1	6	60%
(d) a medical practitioner is called immediately											-	-
(e) Others (specify).....											-	-
How often do your workers clean the debris on your site?												
(a) Weekly	1			1	1		1		1	1	6	60%
(b) Once in 2 weeks											-	-
(c) Monthly											2	20%
(d) Once in 3months		1	1								2	20%
(e) Others (Specify).....						1		1				
How many death cases have you recorded due to fatal injury on your site?												
(a) none												
(b) one	1	1	1	1	1	1	1	1	1	1	10	

(c) less than 5												-	100%
(d) between 5 and 10												-	
(e) Others (specify).....												-	

Source: Author’s field survey (2011)

Summary of Research Findings/Discussions Analysis

Analysis from the above tables show that there are more building contractors followed by suppliers and landscapers than there are road contractors. This indicates that there is a possibility of more building construction works than other projects. It was also discovered that 28% of the contractors played dual roles of being contractors in more than one type of project .The study further reveals that younger contractors are on the increase in the construction business as middle aged men of 36-45 years are more in number, followed by the 25-35 age contractors. The study also reveals that all the contractors are educated as 90% are graduates with 1 contractor having a masters degree. This shows that the quality of delivery of projects should be above average. Although the study didn’t show the disciplines of the responding contractors.

The study also reveals that the contractors provided some level of safety kits for construction workers, though by observation not adequate for all the workers but even at that it was noticed that construction workers still found it difficult to use these kits as most complained of discomfort while working when the kits were worn. The older women, mostly, found it most difficult to wear the kits. 65% of respondents said they provided hand gloves, while 52% provided safety boots and 26% provided helmets and nose masks.

While no respondent reported of any fatality or death related accident case, the study also shows that 80% of respondents’ workers are not on any form of medical insurance. However, 60% agree that they take any injured worker to the nearest health clinic once there is an injury occurrence. The study further revealed that 60% of respondents said that injuries happen occasionally and rarely and while none reported that injuries happen daily, weekly or fortnightly, 40% accept that at least one injury was reported in a month.

70% of injury cases reported showed that nail injuries were more prevalent. This could also be affirmed through the high number of building projects are on-going or have just been completed.

In terms of cleanliness of site’s surrounding, over 60% claimed they clean their sites weekly. Meanwhile, it was observed that this assertion is untrue as contractors around here are always written and force almost applied before they respond to cleaning their sites. And this normally takes several weeks from when the letters were served.

It is interesting to know that 20% of respondent did not answer whether they had first aid box or not. It was also observed that while landscaping contractors did not make provisions for first aid box because of the relatively reduced accident rate associated with landscaping, others only respond when the accidents happen while some won’t bother at all or they couldn’t care less.

Analysing the responses shows that the nature of the projects to a large extent determines the number of skilled or unskilled labour the contractor will most likely employ. The scope of the project also matters as it will determine the cost, hence how busy the site will be in-terms of site activities and also the number of construction workers on site.

Nature of project and nature of injuries:

From the responses analysed, it was evident that injuries associated with building projects are different from those sustained through road projects, landscaping projects, rehabilitation projects and even supplies and installation projects. Interviews reveal that road projects recorded more accidents and injuries especially if the project is on a virgin land. Commonest injuries on road projects are snake bites, scorpion stings and wild animals attacks. When rehabilitating roads or working on roads that have already been opened up, the commonest injuries are from road side accidents i.e hit and run vehicles from over speeding, reckless and impatient drivers. Interestingly, interviews from respondents also reports that a new wave of injuries has surfaced or is on the increase-robbery attacks on construction workers by suspected herdsmen and locals around the construction sites. This is due to the fact that site workers are either paid daily or weekly and rarely monthly and in most cases, they are paid in cash and not through banks or other cashless means.

Secondly, injuries associated with building construction workers are falling from heights, strained muscles from lifting heavy objects, inhaling cement powder and other harmful substances, stepping on nails and objects falling on workers from heights. Snake bites and scorpion stings are also common especially if the construction site is on a virgin land and or if the surrounding of the site is untidy.

Landscaping projects was the least project in terms of injuries generated on site and this is as a result of the nature of the job which involves levelling the ground, applying anti-weed chemicals, spreading humus soil and planting. This processes involved in landscaping projects tend to have less associations with injuries. The commonest injuries with landscaping projects are stepping on rake, chemical spill and inhalation and strained muscles from lifting heavy loads or trips of soil in wheel barrows.

Statistics show that there is a reduction in the rate of construction accidents and injuries on sites in most developed countries especially in Europe and this is not only as a result of a drastic reduction in construction activities and not that there were no accidents. Interestingly, the reduction noticed in the UK scene, was due to careful legislative provisions in their constitution. The case is different in most African countries especially in developing nations like Nigeria where data are very difficult to get due to the fact that most accidents on construction sites are neither reported nor documented, laws governing health and safety of the construction worker are not enacted and victims of construction injuries are not fully treated nor compensated. The reasons for these actions are summarised below as the secrecy factors which were from close observations of keen interest by the researcher on these contractors in the last five years.

The Secrecy factors

While some respondents were honest in their responses, a larger percentage was not and this was discovered from cross checking some of the responses and comparing them with prequalification documents of contractors and also by keen observation.

The following were adopted as secret factors as extrapolated from respondents, interviews with both contractors and construction workers. Most responses did not tally with keen observations and cross checked submitted contractors documents. Obviously, contractors get into these practices world over for various reasons amongst which are but not limited to; profit making on the job, protecting contractors name, fear of being blacklisted in order to get more jobs in future, avoiding workers unionism and avoiding paying of medical bills or compensation upon injury of a construction worker.

1. Profit making- most contractors will rather gain more money as profit than spend it on an injured construction worker not knowing that the construction business is a symbiotic relationship between all player and the relationships are more valuable than wealth.
2. Protecting contractor's name-contractors have a name to protect and won't let an injured worker tarnish their image. But isn't it of more worth and value when a contractor rises to the occasion to treat a fellow human humanely?
3. Workers Unionism-it was obviously glaring and observed with keen interest that once any construction worker mentions anything to do with any labour or trade union, the contractor looks for an immediate alibi to get such a worker laid off.
4. Payment of medical bills-this study also revealed that contractors shy away from paying medical bills by not having workers on medical insurance even as the construction industry is the third most dangerous of work places on earth.

ii. Secrecy factors as portrayed by construction workers:

Interviews with some contractors opened up a new revelation as it reveals that there are some unsafe practices by the construction workers as well. These are but not limited to; construction workers dislike for wearing safety kits, working with machines not trained in, high level of promiscuity and insincerity to sources of ill health.

1. Dislike for wearing safety kits-construction workers complained of the discomfort lied in wearing and working some of these kits, such as safety boots, nose masks and hand gloves. Since they are not used to these kind of dressings, they complain a lot about wearing them.
2. Working with machines not trained on-interviews also reveal that some male construction workers attempt to operate machines they are not trained on or are still undergoing training on and have not mastered the act. This practice is done to attract a little more earning that is associated with working with such machines, thereby exposing them to injuries caused by machine malhandling.
3. High level of promiscuity-it also revealed that because a lot of these construction workers leave their homes and families behind for days, they are exposed to promiscuous behaviours which compromises their strength and exposed them to health risks.

Recommendations and Conclusion Expected Contribution to Knowledge

It is expected that the recommendations of this study will contribute to knowledge in the following areas, when the under listed are done;

- Expose all cases of injuries that the main or sub contractor intends to hide or conceal by raising litigation process against such contractor.
- Make key players more sensitive to the plights of the construction workers by creating more awareness through campaigns and forming volunteer litigation groups
- Help define and put adequate structures on ground concerning the health and safety of the construction worker by enacting laws to protect them.

5. Recommendations and Conclusion

Recommendations

The following are therefore recommended so as to drastically reduce construction accidents and have zero tolerance for fatal injuries;

- All construction workers should be extra careful when working on site, because of the peculiarity of hazards associated with construction sites.
- Health and safety rules for all sites should be read out for the construction workers to listen before they commence work,
- Construction workers should ensure they remove all injury causing items to a safer place where such items will not cause injuries.
- Contractors should provide working kits such as hand gloves, boots and crash helmets for site workers and visitors as well and ensure they are always worn.
- Stakeholders responsible for enforcing that safety kits are worn should rise up to their responsibilities and ensure this is done.
- All construction workers involved in any form of injury should request for immediate treatment as soon as the accident occurs on site
- All construction workers should watch out for any accident case that is not properly attended to and report such to the relevant authorities
- The government and key players in the construction industry should place proper structures on ground such as insurance policies to involve the construction worker
- Government should also make sure such policies are implemented and offenders are penalized.
- More litigators should take interest in the plight of ordinary citizens like the construction worker
- The first aid box must be a priority in the preliminary items a contractor must present before work begins on site and training should be given to workers on first aid practices.

It is a known fact that a construction site with a lot many construction machines at the same time is dangerous for those working at the site. For all construction site workers, it is necessary to follow certain safety rules which are discussed below:

- The worker should always bring water to keep him hydrated. He can also apply a sunscreen lotion to protect him from the ultraviolet rays of the sun.
- Lifting objects is an essential part of construction work. But this should be done in a proper way, otherwise, it can also damage the back of the worker. So, while lifting, the worker should keep his back straight, bending only the knees. The whole hand should be used while lifting. It is also required that the object while being lifted is kept close to the body. The feet should be moved, and not the waist. Heavier objects should be lifted by more than one person.
- Electrical tools are also used in construction site and a construction worker should be very careful while using electrical tools. Tools should always be unplugged when they

are not in use. Before using power saws, the blade guards should be in proper position. Hands should be completely dried before using electrical tools. Moreover, electrical tools should never be carried by their electrical cords and with fingers on starting buttons or triggers.

- Some common rules that need to be followed are never to run while at a construction site. The construction site should be kept clean in the sense that trash and other unwanted objects are properly disposed of so that there is no chance of tripping. Nails that stick out of wooden objects need to be bent inwards. Workers need to be alert at all times. They need to be observant and never enter a trench more than 5 feet deep alone.

Conclusion

Most construction accidents on site can be avoided if simple safety rules are followed religiously. The health and safety of construction site workers are the responsibility of the employer as well as the employee, both should ensure that they play their roles effectively. The Government also has a role to play in ensuring that Health and Safety laws and procedures are carried out to the latter, by not only implementing laws but by also enforcing these laws. For victims who are involved in an accidents that maims or renders the victim inability to continue work, this phenomenon instantly terminates the chances of the worker's continuing work at such a site. On most occasions, they are paid off instantly for the day or even week or even for the month and are told not to return to site again. In some instances, even when the accident victims recuperate and come back to site with the intention of working again, the employer wouldn't show interest in the victim working at the site anymore, worse cases even exist. Such victims should seek legal redress. The earlier stakeholders have a take on these issues the better for the welfare of the construction worker.

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Globalization and the Physical Environment: A Test for Co-Integration

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Abstract

Global physical environmental concerns were born out of the recognition that ecological process do not always respect national boundaries and that physical environmental problems often have impacts beyond border. The challenges of globalization on physical environment which has heightened significantly the pollution of air, water, soil, accelerated climate change, rise in environmental problems and global warning has put back on the policy agenda and intensified debate on the mixed blessing of globalization. Therefore, the links between physical environment and globalization needs to be re-examined and recognized. This paper attempt to establish both the nature of causation and relationship between globalization and physical environment. These questions were addressed using Engle-Granger Causality test and Co-integration test. The results found that there is a bi-directional causation and long-run relationship between globalization and physical environment. In the main, the results are consistent with the literature that globalization creates economic opportunities but also gives rise to new problems and tensions. This paper therefore, submits that international physical environment issues requires international cooperation, a system in which Countries interact under a set of multilateral rules determined by multilateral negotiations and monitored by multilateral institution.

Key words: Globalization, Physical Environment, Co-integration.

Introduction

The processes that we now think of as “globalization” were central to the physical environmental cause well before the term “globalization” came into its current usage. Global physical environmental concerns were born out of the recognition that ecological processes do not always respect national boundaries and that physical environmental problems often have impacts beyond border.

The march of globalization seems inexorable, with effects felt on the physical environment in the area of reduced genetic diversity in agriculture (loss of crop varieties and livestock breeds), loss of spread of exotic species, pollution of air, water and soil, accelerated climate change, rise in environmental problems of international transport, insecurity, terrorism, global warming. Global warming has become a major concern as we are currently witnessing grave effect of climate change such as the ozone layer depletion, deforestation and polar ice melting on the ecosystem (Clark 2013). The increasing threat of global warming and climate change has focused attention on the relationship between economic growth and environmental pollutants. In 2007, the Intergovernmental Panel on Climate Change reported that the average global temperature was estimated to rise between 1.1 and 6.4 °C in the next 100 years (IPCC, 2007). It is predicted that a mere 2 °C increase in temperature would generate substantial change to many natural ecosystems and an increase in the sea-level that would have a major impact on the lives of half of the world’s population that live in coastal zones (Lau *et al.*, 2009).

The effects of global warming on the planetary earth has increased the temperature from 2.3 to 4.6cent degree over the past one hundred years (Daniel 2004) and increase in temperature is largely due to human activities such as industrialization which has led to increased consumption of fossil fuels (oil, gas, coal, wood). The use of fossil fuels and other agents such as chlorofluorocarbons are responsible for emitting dangerous greenhouse gases.(clark 2013). Within structural Adjustment Programmes most governments decided to withdraw from the multiplication and distribution of seeds but retained a regulatory and sometimes, a research role. Production and distribution of seeds has been taken over by large, multinational seed suppliers or by consortia of multinationals and local companies in many African Countries. The new arrangements tend to favour the most profitable areas of the market where large quantities of a single variety of seeds can be supplied to larger farms. Seed supply has, therefore, become more efficient at the wholesale level but not at the level of the small-scale farm.

Africa and the World over, is currently facing the adverse effects of global warming that is seriously affecting the continent in every dimension. It has been noted that Mount Kilimanjaro one of the highest mountains in the world is now being affected by global warming as glaciers are gradually disappearing. In a related development, the current weather phenomena are affecting other glaciers high peaks in the African continent such as Ruwenzori in Uganda and Mount Kenya in Kenya. Also lake chad is rapidly receding up as a result of climate change. Its original size of 1963 has now been reduced to mere 5% (George 2010)

In Nigeria, floods and landslides are now recurring annual incidents as witnessed in the northern states of kebbi, sokoto, zamfara, kogi and Nassarawa in recent years (Daily trust newspaper October 10 2013). These floods have left Nigeria poor due to loss of lives and properties including farm produce and the trend gets worse with each passing year. Similarly landslides in Benue state destroyed lives, homes and large farm lands and led to the displacement of farm settlements. In the Northern states such as Borno, kaduna and Kastina the encroachment of the Sahara desert has extended to a wider areas of lands. Several areas of land

had turned to semi-desert or desert causing worse ecological problems. In southern Nigeria, over 3,000 hectares of forest is lost every year. Thus, the southeastern States are facing grave ecological challenges ranging from gauge erosions to laying barren of rain forests. The coastal region is facing encroachment by sea water which is causing coastal erosion. In Lagos, the sea surge has affected island gravely. Also in other coastal states such as Delta, Bayelsa and Rivers, the effects of sea on roads are causing grave ecological challenges. Connected to this was the notion that the ability of humans to act and think at a global scale also brings with it a new dimension of global responsibility not only to planetary resources but also to planetary fairness (Najam.A. etal 2007).

Globalization has ushered in an era of contrasts-one of fast-paced change and persistent problems (Daniel .C. 2004). It has spurred a growing degree of interdependence among economies and societies through trans boundary flows of information, ideas, technologies, goods, services, capital and people. In so doing, it has challenged traditional capacity of national governments to regulate and control markets and activities (Antweiler 2001). The rapid pace of economic integration has led to interlinked world markets and economies requiring a degree of synchronization of national policies across a number of issues. One dimension of this coordination concerns the physical environment from shared natural resources such as fisheries and biological diversity to the potential for trans boundary pollution, spill overs across the land, over water and through the air. (Biermann 2002)

Advocates of globalization love to describe it as a done deal that the result of economics and technological forces have evolved over centuries to their present form. They described it as if it was an uncontrollable, undirected force of nature. (Mander 2001).Therefore, the current debate on globalization has become de-linked from its physical environmental roots and context. However, it is obvious that such passivity is not generally acceptable judging by the evidence of the recent protest in Geneva, the 50,000 protesters in Seattle, the demonstration of more than a million farmers in India and the various uprising in Japan, Brazil, Mexico, England, the Philippines and even New Zealand. Therefore, the links between physical environment and globalization needs to be re-examined and recognized. To ignore this links is to misunderstand the full extent and nature of globalization and to miss out on critical opportunities to address some of the most pressing physical environmental challenges faced by humanity. To achieve the stated objectives, this paper is structured into seven sections. Following this introduction is the literature review which encompasses the conceptual frame work, the theoretical framework in which the paper is situated and then the empirical literature review. Next is the methodology and presentation of results. The last section offers some concluding remarks.

Literature Review

Economics theory suggests that the free market can be expected to produce an efficient and welfare-enhancing level of resource use, production, consumption and environmental protection if the prices of resources, goods and services capture all of the social costs and benefits of their use. However, when private costs which are the basis for market decisions fail to include social costs, market failure result in allocative inefficiency in the form of suboptimal resource use and pollution levels.

Market failures is a hallmark of the environmental domain. Many critical resources such as water, timber, oil, fish and coal tend to be underpriced. Ecosystem services such as flood protection, water retention, carbon sequestration and oxygen provision often go entirely

unpriced. Because underpriced and unpriced resources are over exploited, economic actors are often able to ignore part or all of the environmental lost they generate.

Globalization may magnify the problem of mispriced resources and the consequent environmental harms. This section of the paper is subdivided into:

Conceptual Framework

Globalization

Globalization attracts various definitions and explanations. Some of these are considered below.

Economists view globalization as the growing economic interdependence among countries as reflected in increasing cross boarder flows of three types of commodities. Goods and services, capital and know how.

Globalization can also be conceptualized as both the compression of the world and the intensification of consciousness of the world as a whole. From the sociological point of view, human diaspora is another form of globalization as very large number of people live and work outside their country of origin. Globalization from the point of view of ICT engineers is the connecting the world through technological means whether it is telephone, mobile phone, internet or satellite television.

It can also be seen as liberalization. That is removing government imposes restrictions on movements between countries or as universalization that is the key process of spreading ideas and experiences to people of all corners of the earth so that aspirations and experiences around the world become harmonized.

Physical Environment

The physical environment comprises of the material and tangible conditions in which we live. Physical environment includes:

*Natural Environment- air, noise, water, green space

*Built Environment- houses, road, and transport system.

The physical environment is an important determinant of health influencing the prospects of health in so many ways. Air quality affects people's health and especially that of people with respiratory disease. Infectious disease transmitted through water toxic materials in the environmental can cause disease and interfere development. One important way in which man is damaging his environment is through emissions of carbon dioxide and other greenhouse gases. The rise in carbon dioxide concentration in the atmosphere is resulting in global warming and climate change.

Globalization is, in part, an ecological fact. There exist a series of physical environmental challenges that span multiple countries and even the globe. Polluted waters, collapsing fisheries, invasive species and the threat to climate change are all realities that have been exacerbated by globalization. The value that citizens around the world place on nature and biodiversity within foreign jurisdictions may spur international political pressures that limit a country's economic and regulatory choices. Protection of the shared resources of the global commons-the oceans, the atmosphere etc. provides a rallying point for NGOs aiming to promote worldwide collective action. Increased understanding of the interdependence of ecological systems contributes to establishing a more robust global environmental regime.

Theoretical Framework

Globalization and global governance theory

This theory suggests that without effective international scale Governance, globalization may intensify environmental harms wherever national regulatory structures are inadequate. The strengthening competitive pressures across national borders, economic integration may help consumers by lowering prices, improving services and increasing choice. But these same pressures at times threaten to overwhelm the regulatory capacities of national governmental coordination of the domestic policies and cooperative management of the global commons. Some problems are local and can be best addressed on that scale but even in these cases, there is a clear advantage of leaning from other countries and localities that have managed to address similar issues. In other cases, the problems are so inextricably international that a coordinated multi-country response is required. The theory therefore states that the solution to this policy dilemma lies in a structured programme of collective action. But the collective action problem is especially difficult in the real international realm. There is no leviathan or overarching authority. While the number of beneficiaries and potential contributors to a global public good may be much larger than on a national scale, so too is the number of potential contributors to a public “bad”. The problem therefore is one of organizing and maintaining cooperation. Absent institutional support and efforts at collective action tend to degenerate towards what is called in game theory a lose-lose or Nash equilibrium.

Global Bargaining forum theory

The theory suggests that successful responses to global scale environmental problems depends on effective international agreement. To be workable, any such agreement must equitably distribute the burden of international collective action. Developing countries will often need support, subsidies and other incentives to encourage their efforts to internalize externalities. The theory argued that these would be a great value in a forum for facilitation of international deals to the custodians of environmental assets. A global bargaining forum could act as a catalyst for action facilitating financial discussion among countries or private entities. A government in one country might for example negotiate a deal to preserve a particular natural resource in another country in return for a sum of money or other policy benefit.

Empirical Literature

Globalization presents a mixed blessing for the environment. It creates economic opportunities but also gives rise to new problems and tensions. By increasing the volume and decreasing the cost of information, data and communications, globalization also offers expanded access to knowledge, new mechanisms for participation in policy making and the promise of more refined and effective modes of governance. Understanding this array of effects-economic, regulatory, information and pluralization is essential if one is to make sense of globalization’s impact on the environment. The literature suggests that globalization and physical environment is a topical issue yet researchers hold different opinions.

Daniel .C. etal (2004) examined Globalization and environmental protection: a global governance perspective, using content analysis, they found that in coordinated national environmental policies might become non-tariff barriers to trade that obstruct effort to open market. Also that national level environmental policies may influence international action and ecological realities may require policy coordination and collective action on a global scale. In the same vain, Najam .A. etal (2007) examined Environment and Globalization: Understanding the Linkages, they found that the dominant discourse on globalization has tended to highlight the promise of economic opportunity but on the other hand, there is a parallel global discourse

on environmental responsibility. To them, a more nuanced understanding needs to be developed, one that seeks to actualize the global opportunities offered by globalization while fulfilling global ecological responsibilities and advancing equity. Frankel. J. (2003) investigated “the economy and globalization”, he found that it is an illusion to think that environmental issues could be effectively addressed if each country were insulated against incursions into its national sovereignty at the hands of international trade. That increasingly, people living in one country want to protect the air, water, forests and animals not just in their own countries but also in other countries as well and to do so, international cooperation is required. Other attempts to quantify the effect of globalization on the environment is a study by Strutt and Anderson (1998) on Indonesia.

Using a modified version of the global general equilibrium model (GGE) known as GTAP they project the world economy to 2010 and 2020 with and without trade reforms. They found the effects of globalization on the Indonesian environment (air and water pollution) are traced through a special environmental module attached to the Indonesian part of the GTAP. They, then identify the effects of key air and water quality indicators of changes in the level and consumption of output and in production technology arising from (a) full global implementation of Uruguay Round commitments by 2010 and (b) additional move to MFN free trade by APEC countries by 2020. Without the trade reforms, the aggregate activity (scale) effects of economic growth on pollution are, as expected, positive and the technology effect negative, the intersectoral composition(or structural effects are mixed but mostly positive. The authors conclude that for Indonesia trade policy reforms slated for the next two decades in many cases would improve the environment (at least with respect to air and water pollution) and reduce the depletion of natural resources, and in worst cases add only slightly to environmental degradation and resources depletion even without toughening the enforcement of physical environment regulations or adding new ones. Anil (2006) examined the impact of globalization on Indian environment. Using content analysis, he found the followings:

- (a) That the biggest problem Indian agriculture faces today and number one cause of farmer suicides is debt. Debt trap are caused by the soaring input costs, the plummeting price of produce and a lack of proper credit facilities which makes farmers turn to private money lenders who charge exorbitant rates of interest.
- (b) That one measure of globalization policy which had an immediate adverse effect on the farmers was the devaluation of the Indian Rupee in 1991 by 25%(an explicit condition of IMF loan). The Indian crops became very cheap and attractive in the global market and led to an export drive. Farmers were encouraged to shift from growing a mixture of traditional crops to export oriented cash crops like cotton and tobacco.
- (c) That with a view to open India’s markets, the globalization reforms also withdrew tariffs and duties on imports, which protect and encourage domestic industry. This results in India removing restrictions on imports of almost 1,500 items including food.

Methodology

Introduction: This section highlights the various methods and techniques that were used in generating, organizing and analyzing the data to help in achieving the objective of the paper.

Sources of data

Secondary data were used in the course of this study. Data on globalization were proxy by data on openness and physical environmental degradation is obtained from Federal office of statistics, National bureau of statistics, central bank of Nigeria statistical bulletin for various years and world bank data.

Method of data analysis

Model Specification

In accordance with the set objective of the study. The following models are specified.

Granger Causality and Co-integration

To test for Granger Causality and Co-integration, we use the standard methodology proposed by Granger (1969, 1986) and Engle and Granger (1987) as described in Enders (1995). All tests are performed on natural logarithms of the indices time series using simple OLS estimation procedures.

Granger Causality Model In order to test for Granger Causality between globalization proxy by openness (X_t) and physical environmental degradation (Y_t) we estimate the equation.

$$\Delta \ln Y_t = C + \alpha \sum_{i=1}^k \Delta \ln Y_{t-i} + \beta \sum_{i=1}^k \Delta \ln X_{t-i} + \varepsilon_t \quad (1)$$

The null hypothesis claims that X_t does not Grange cause Y_t . Therefore, the rejection of the null hypothesis indicates a presence of Granger Causality. For globalization (X_t) and physical environmental degradation (Y_t) we performed a pair wise granger causality tests. To do that we can decide whether X_t granger causes Y_t or Y_t granger cause X_t (uni-directional or both (bi-directional) or none.

Cointegration Model When testing for Co-integration of a pair (globalization and physical environmental degradation), we have to first determine if the logarithms of both indices are integrated of order 1, denoted by $I(1)$. It means that the levels of the series' logarithms must be non-stationary (contain a unit root), and the difference must already be stationary. To test for stationarity, we employ the standard Augmented Dickey-further test (ADF test).

For levels we estimate equation (2) and for difference equation (3).

$$\ln Y_t = C + \beta t + \delta \ln Y_{t-1} + \sum_{i=1}^k \alpha_i \Delta \ln Y_{t-i} + \varepsilon_t \quad (2)$$

$$\Delta \ln Y_t = C + \Delta \ln Y_{t-1} + \sum_{i=1}^k \alpha_i \Delta \ln Y_{t-i} + \varepsilon_t \quad (3)$$

This means that we allow the levels to contain a constant term and a linear time trend while for the differences; we include only a constant term in the estimated equation. Under the null hypothesis of the presence of a unit root (non-stationary), the test statistics defined as t-ratio of $(\alpha - 1) = 0$. Comparing the test statistics with the sample critical value tabulated by Cheung and Lai (1995), if the test statistics is lower than the appropriate critical value, then we reject the null hypothesis and decide that the time series is stationary. Otherwise, we regard the series as non-stationary (containing a unit-root). Since the logarithms both series X_t and Y_t are found to be 1 (I), then we proceed to the test of co-integration. We therefore estimate a simple linear relationship between the two time series defined by equation (4) and (5).

$$\ln Y_t = C + \alpha \ln X_t + \varepsilon_t \quad (4)$$

$$\ln X_t = C + \alpha \ln Y_t + \varepsilon_t \quad (5)$$

Then applying the ADF test to the estimated residual ε_t , we have;

$$\varepsilon_t = \delta \varepsilon_{t-1} + \sum_{i=1}^k \alpha_i \Delta \varepsilon_{t-1} + \varepsilon_t \quad (6)$$

By comparing computed statistics with critical values tabulated by MacKinnon (1991), if it is stationary at Mackinnon critical value of 1%, then, there is long-run relationship, if otherwise, short-run relationship existed

Presentation and discussion of findings

Table 1: pairwise granger causality test

	F-statistics
Xt does not granger causes Yt	12.01274
Yt does not granger causes Xt	11.23802

Critical F-values of 1%, 5% and 10% with 13 DF are 7.21, 3.98 and 2.86 respectively

Table 11: co-integration test

ADF TEST	Mackinnon critical values
ADF test statistics for Xt-8.64836	1%-3.9635
ADF test statistics for Yt- 9.47837	5%-3.6818
	10%-2.6829

We logged transformed to harmonize the unit of measurement

Discussion of findings

Table I contains the pair wise causality test to investigate the nature of causation between the variables (globalisation and physical environment). From the results, the null hypothesis that Xt does not Granger cause Yt was rejected since $F_c > F_t$ ($12.01274 > 7.21$ (1%), 3.98 (5%) and 2.86 (10%) level of significance with 15 degree of freedom. Also the assertion that Yt does not granger cause Xt was rejected given that $F_c > F_t$ ($11.23802 > F_t$ at 1%, 5% and 10%), level of significance.

In table II, the Augmented Engle – Granger Co-integration test was used to verify whether it was long-run or short-run relationship that existed between Xt and Yt. Given that the calculated or computed statistics were both greater than the tabulated statistics at 1% Mackinnon critical value, it implied that there was a long-run relationship between globalization and physical environment. The result re-affirms the fact that increasing globalization affects the physical environment leading to reduced genetic diversity in agriculture (loss of crop varieties and livestock breeds), loss of spread of exotic species, pollution of air, water and soil, accelerated climate change, rise in environmental problems of international transport, insecurity, terrorism, global warming

Conclusion

International physical environmental issues require international cooperation, a system in which countries interact under a set of multilateral rules determined by multilateral negotiations and monitored by multilateral institutions. Also that negative physical environmental effects result from trade in hazardous wastes and toxic chemicals which does not respect national borders.

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Influencing Factors in Adaptive Reuse of Shop Houses

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Abstract

Rapid development in the George Town city centre faces the challenge in the conservation of the heritage buildings and living spaces, as well as the change in traditional lifestyle and pressure for the reuse and redevelopment of shop houses for commercial purposes. The objective of this study is to identify the influencing factors in adaptive reuse of shop houses in George Town, Pulau Pinang, Malaysia which was selected using a snowball sampling method. This research used a qualitative thematic analysis to analyse data. Findings indicate that there are six (6) influencing factors in adaptive reuse of shop houses in George Town, Pulau Pinang, Malaysia such as economy, physical attributes, financial, stakeholder's preference and experience; site attributes; regulations and legal. These factor, need to address by policy makers, developers and owners during the formative stages of the designing process in ensuring that efforts in preserving the buildings' outstanding universal values can be ameliorated.

Keywords: Adaptive Reuse; Shop Houses; Qualitative Thematic Analysis.

1. Introduction

There are three issues that affect the successful conversion of existing buildings to new uses; (1) the compatibility of the building with a new program, (2) the economic feasibility of making a conversion versus new construction. (3) commitment of an owner even when total replacement might cost less (Gause, 1996). While come to the consideration of adaptive reuse, it is beginning to receive widespread attention due to the economic, social and environmental benefits that can be espoused as shown in Table 1.

Table 1: Description of selection criteria

No.	Criteria	Description
1.	Cultural aspect	Historical value; artistic value; conditions of integrity and/or authenticity.
2.	Economic aspect	Potential market; financial sources; subsidize; initial investment and necessary investment in future maintenance; profits from market demand; benefits of exemption.
3.	Architectural aspect	Physical condition of the building; architectural character and evaluation; space gain and space change; structural analysis; technological value; materials and decorations of the building; building code.
4.	Environmental aspect	Site and situation; scenic/contextual value and the environmental effect; land use plan or zoning; regional development policies; potential environmental quality of the surroundings.

Adaptive reuse implementation demands an appropriate context. It is generally regarded that the following conditions must be met (Chusid, 1993).

1. The existing function or purpose of the facility has become inappropriate due to changing social expectations and/or market demand.
2. The facility has significant embedded physical life (or residual value) and structural integrity.
3. There is some compelling cultural, heritage or environmental value in the facility to support its retention.
4. An argument can be mounted to show that the proposed new use delivers a higher value for money ratio than alternative new build or sale options.



Figure 1: Shop houses at Lebuhr Armenian George Town, Pulau Pinang, Malaysia.

The definition of a shop houses (Figure 1) is “a terraced house that combines the functions of a shop and house. However, in Pulau Pinang, terraced houses are generically called shop houses” (Lestari Heritage Network, 2005). The term shop houses refers to a building form that is unique to the settlement of Straits of Malacca. Typically the shop houses function as both residence and shop, with the ground floor used for commercial purposes, while the top floors are for residential purposes (Draft George Town Special Area Plan, 2011). Adaptive reuse is the act of finding a new use for a building. It is often described as a “process by which structurally sound older buildings are developed for economically viable new uses” (Austin, 1988). Sometimes adaptive reuse is the only way that the buildings fabric will be properly cared for, revealed or interpreted, while making better use of the building itself. Where a building can no longer function with its original use, a new use through adaptation may be the only way to preserve its heritage significance. In Malaysia, consciousness with regards to urban conservation is still a new phenomenon. In Kuala Lumpur, for instance, a growing concern among people arose due to the destruction of the urban environment and the threat to some of the city’s familiar and historical landmarks with the consequent alteration of the city’s character (Wan Hashimah, 2005). This research focuses on the shop houses in George Town, Pulau Pinang, Malaysia. The objective of this study is to identify the influencing factors in adaptive reuse of shop houses in George Town, Pulau Pinang, Malaysia.

2. Methods

This research used a qualitative thematic analysis to analyse data. In-depth interview is used to provide insights into what is the factors that been considered in the adaptive reuse of shop houses in order to stay within the parameters and acceptable performance and standards. In the end of ground work, ten (10) stakeholders such as one (1) from the planning authorities, two (2) from non-government organizations (NGO) and seven (7) from private investors were interviewed. From the views of respondents, researcher also has a preliminary investigation with building owners and professional.

3. Results

Through this analysis of the influencing factors in adaptive reuse of shop houses in George Town, Pulau Pinang, Malaysia, there are six (6) influencing factors in adaptive reuse of shop houses in George Town, Pulau Pinang, Malaysia such as economy, physical attributes, financial, stakeholder’s preference and experience; site attributes; regulations and legal.

Economy

Adaptation has to be economically viable to be successful, although sometimes economic costs can be traded against the social and environmental gains (Ball, 2002; Snyder, 2005). This perspective is generated from a triple bottom line accounting theory that has developed with an increased importance of sustainability. Most of the respondents mentioned the market force as the main factor that boosts the adaptation activity in George Town. The market potential is about all kinds of activities available. After George Town is listed as World Heritage Site, more people and business opportunities are attracted into George Town. The status of World Heritage Site does not only label George Town as historical city, but also causing it to be a tourist hot spot. Armenian Street is located in the central zone of George Town, and there are thousands of tourists who visit this street daily. Therefore, a tourism-based activity is chosen to be adapted as the new business in the shop houses. Adaptive reuse of shop

houses is necessary in order to meet the market force. Not only foreign investors are coming into George Town, the locals are also starting to realize and be aware of the potential of tourism development in George Town.

Physical Attributes

Built assets serve different functions in different period of time. While the concept of 'shop home' was deemed too difficult to retain in shop houses, new development tend to adapt these shop houses with a significant amount of capital expenditure. Unfortunately, historical buildings in George Town such as rows of shop houses are abandoned and left obsolete which unfortunately do not present much opportunities for reuse due to extensive compartmentalization. These assets that are not fully utilized of their availability plot ratio or zoning would not be in an economical proposition for reuse purposes. The space and function of a building is one of the factors taken consideration when new businesses are adapted into shop houses. "Levels of adaptation and the reuse of shop houses depend on the space and function of the building. For example, galleries would require a larger and longer interior space in order for exhibition purposes. In addition to this, the antiquity of these shop houses provides more flare which is a signature to the art gallery. The 'natural beauty of a built asset', in the process of adaptive reuse, the history of the building's function, décor and structure needs to be conserved in order to portray the idea of heritage and its antiquity. It is discovered that the occupied status and physical condition of buildings itself are the factors that affect the adaptation of shop houses into the usage of new business.

Financial

Financial matter is a point of consideration for many building owners in determining the practice of adaptation besides strongly associated with risks and government incentives in the decision to adapt and reuse the building. Based on the interviews with stakeholders, various financial considerations are taken into account by shop house's owners when they are confronted with the decision to adapt and reuse the building. They are particularly concerned about the redevelopment cost, including renovation cost, operation cost, marketing and maintenance requirement. The willingness of new business owners to adapt and reuse shop houses is dependent on the cost benefit analysis of the whole adaptation process. Development and construction costs are one of the factors that influence a business owner's decision to reuse or demolish the built assets that are close to their life expectancy. The issue concerning cost is also taken into consideration based on their aesthetic appearances, operational costs and productivity of new business which are associated with the existing built assets.

Stakeholder's Preference and Experience

According to the interviewees, stakeholder's preference and experience is the main consideration in the adaptive reuse decision making process. Most of the adaptive reuse projects in George Town is facilitated by private investors, either local or foreign. Their opinions and preferences on the types of business to be adapted into the shop house are the most significant factors in decision making. When there is a change of preference and demands, there will be more likely to have adaptive reuse. Investors and business owners will decide the new activities in the shop houses according to their experience and preferences. They seldom seek professional assistance such as architectures or consultants. The investors tend to follow the trend of development in foreign cities such as Guang Zhou, China and Cheng Mai, Thailand. The idea of revamping ancient historical building to new commercial activities such as café and accommodation business is inspired by their travelling experiences to these

historical cities. However, the business owners are less concerned about the environment impact as their main focus is on the business profit.

Site Attributes

Factors of the adaptive reuse projects are related to social and demographic attributes for example location, transportation and amenities, or the disruption pose to the neighbourhood. From the interview, the respondents also mentioned about the parking space availability and accessibility of the building. These factors are important when the stakeholders consider the adaptability of the building. The location and accessibility of the shop houses are the main consideration when choosing a suitable building for the business of budget hotel. Areas of Love Land and Muntri Street have a high concentration of tourist due to their antiquity and their unique structures. The factors of location and accessibility are the main concerns for suitable shop houses for a café. Queen Street is very liveable and besides being a tourist hot spot which brings much advantage to a café.

Regulations and Legal

Adaptive reuse also influence by regulations and legal factors. Shop houses have legal issues attached to ownership, transfer of ownership and in regard to leasing. Adaptation is affected by the tenure of property for example, is the person undertaking the adaptation the owner of lessees? Private owner may reside offshore and may hold the property for a number of reasons, for example for future development or rental income or capital growth.

4. Conclusion

There are six (6) influencing factors in adaptive reuse of shop houses in George Town, Pulau Pinang, Malaysia such as economy, physical attributes, financial, stakeholder's preference and experience; site attributes; regulations and legal. The influencing factors under the group of economy are as the potential market, market force and tourism demand. For physical attribute, these factors are such as building adaptively from the interior space, practicality of shop houses and the potential of vacant unit. Costing is the most important factor in the financial consideration. In the stakeholder's preference and experience, change of need is their main consideration to adapt heritage shop houses into new activity. Moreover, location and the accessibility of these buildings are categorized under the group of site attributes. For regulations and legal factors which pose only minor impacts in the decision making process.

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Local Government: Organ of Administration or Development?

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Abstract

The local government is the third tier of political administration in several countries of the world including Nigeria. Where it is effectively operational, it could serve as a platform for rapid development of the grassroots. It is this tier of government that this paper tries to review its position in political administration vis-a-vis its role in the development of its area of jurisdiction. While its roles as government are clearly stated in the constitution, it is the most often abused tier of governmental operation. Largely, many of the local governments lack the capacity and capability to survive economically without the support of the other tiers of government (Federal and States). The heavy reliance on other tiers of government steers up corruption and other vices that incapacitate the government to discharge its role effectively and efficiently. The emergence of this tier of government in Nigeria up to its reform by the military administration in 1976, its sources of revenue along with its impact on the economy are discussed. Finally, it is believed that local government could be a catalyst in the attainment of the Millennium Development Goals (MDGs), being both an organ of administration and of development, if it is allowed to operate unfettered.

Key Words: political administration, development, government.

1. Introduction:

The administration of the Nigerian state, being a federation, is vested in three tiers of government, namely: the federal, the state and the local. The federal government is in control of the entire federation as a unit and most important sectors of socio-economic life of the nation. The state governments take care of the administration of the 36 states as defined in the constitution while the local governments are in charge of the administration of public affairs at the grassroot level. The Federal Capital Territory is given a special status as an administrative unit, making a senatorial district and with 5 local government areas. It is administered as a Ministry in federal arrangement. The way and manner each of the governments is to be constituted and run along with the functions to be performed by them are clearly spelt out in the 1999 Constitution of the Federal Republic of Nigeria. All governments within the federation derive their powers from this constitution and the laws made in conformity with the constitution.

2. Meaning and the Need for Local Government:

The United Nations Office for Public Administration defines local government as : a political subdivision of a nation or (in a federal system) state, which is constituted by law and has substantial control of local affairs, including the powers to impose taxes or to exact labour for prescribed purposes. The governing body of such an entity is elected or otherwise locally selected.

Local government is defined by the 1976 Local Government Reforms document as: government at local level exercised through representative council established by law to exercise specific powers within defined areas. These powers should give the council substantial control over local affairs as well as the staff and institutional and financial powers to initiate and direct the provision of services and to determine and implement projects so as to complement the activities of the State and federal governments in their areas, and to ensure, through devolution of these functions to these councils and through the active participation of the people and their traditional institutions, that local initiative and response to local needs and conditions are maximized.

The definitions above bring out the following key characteristics of local government.

- (a) It is a subdivision of a nation.
- (b) It exists within defined territory.
- (c) Local government officials are elected. Regular elections at specified period of time is a feature of local government.
- (d) It has legal personality distinct from the State and Federal Governments.
- (e) It has specified powers to perform a range of functions including imposition of taxes and incurring of expenses; and
- (f) It enjoys substantial autonomy. This includes powers to make its own laws, rules and regulations; formulate, execute and evaluate its own plans and the right to recruit, promote, develop and discipline its own staff.

Various reasons have been advanced (Ugwu, 2000 and Gboyega, 1987) for the need for local government. They include the fact that:

- (i) Local people will understand the problems confronting them more than other people and will be in better position to address the problems.

- (ii) Local government provides opportunity for people to determine who should govern them at the local level.
- (iii) Local government promotes personal liberty and participation of the people in governance. This is particularly important as it has been documented that participation by citizens is not only crucial for democracy and development but also that when citizens participate in the planning, execution, utilization and assessment of social amenities of facilities designed to improve their welfare, success of those efforts are assured.
- (iv) Local government serves as training ground for leaders who will subsequently move to State and federal levels. This is why local government has been described as “nurseries of democracy”. This is particularly important in developing countries like Nigeria, which have been under long years of colonial and military rule with very limited experience in democratic governance.
- (v) It serves as a centre for development as infrastructures will be extended, jobs will be created and economic activities will be boosted as construction works will bring multiplier effect on the whole area.

It is also necessary to define administration and development as concepts in this paper. *Administration* relates to the process of organising resources and men to execute projects or carry out certain functions that will lead to the attainment of organisational goals.

Development is a social concept that economists use to distinguish between *growth*, (basically meaning more of the same—more goods and services) and *development*, which means growth accompanied with structural and technological change. Before development can be said to have taken place there must be increases in the quality and quantity of output, improvement in technology, standard of life and social well-being of the citizens.

3. Review of Nigerian Local Government System:

Local government administration is long dated in Nigeria. It can be said to be as old as the colonial rule in the country. It was known by various names like Native Authority, (during the period of Indirect Rule when the traditional rulers were put in charge of local administration) District Councils, Divisional Councils, etc. The main function of the native authorities was to maintain law and order. The first native authority ordinance recognized traditional rulers as native authorities. This was easily done with a large measure of success in the northern part of the country. It was a bit difficult to introduce such arrangement in the southern part as there were multiples of native authorities in the south and one authority will not be ready to surrender to another authority.

In the years 1950-55, the first largely elected local government council emerged in Lagos and the former Eastern and Western regions. Traditional rulers constituted not more than 25 percent of most councils in the then Western region and Lagos. However, in Northern Nigeria, the changes were more gradual. By this time, the councils were given a wider range of functions including primary education, health, police, judiciary e.t.c. (Igbuzor, 2007).

Between 1960-1966, there was a decline in the prestige and responsibilities of local authorities. In the former Western region, the local government (Amendment) law 1960 abolished the powers of councils to levy education and general rates on the basis of need. In Lagos, there was a high rate of default in the payment of property rates including government institutions, which reduced the revenue of the local councils. The situation in Eastern Nigeria was similar to the West before the outbreak of the civil war in 1967. In Northern Nigeria, there were gradual changes in the structure of the councils with increasing numbers of elected or appointed non-traditional office holders becoming members of local authorities. The result was

that the local authorities had a stable administration, which enabled them to assume responsibility, with some degree of success for more complex services like primary education. Between 1969/71, some state governments introduced some changes in the structure of their councils.

4. The 1976 Local Government Reforms in Nigeria:

In 1976, the Federal Government of Nigeria in collaboration with the state government embarked on extensive reforms of local government. The main objectives of the reform are the followin:

- (a) To make appropriate services and development activities responsive to local wishes and initiatives by devolving or delegating them to local representative bodies.
- (b) To facilitate the exercise of democratic self-government close to the grass roots of our society and to encourage initiative and leadership potential.
- (c) Mobilisation of human material resources through the involvement of members of the public in their local development, and
- (d) To provide a two-way channel of communication between local communities and government (both State and Federal)

For the first time in the history of local government in Nigeria, a uniform system was developed for the whole country. In embarking on these reforms, the Federal Military Government was essentially motivated by the necessity to stabilize and rationalize Government at the local level. This must of necessity entail the decentralization of some significant functions of state governments to local levels in order to harness local resources for rapid development.

Unlike previous reform measures, which were highly restricted in scope and range, the 1976 reforms conceptualized local government as the third tier of government operating within a common institutional framework with defined functions and responsibilities. As the third tier of government, the local government gets statutory grants from Federal and state governments, and is expected to serve as agent of development especially in rural areas. According to the 1976 reform, 75 percent of members of the council are to be elected through the secret ballot on a no-party basis under the direct and indirect systems of election. The remaining 25 percent are to be nominated by the State government. Following the reform, the Federal Government in 1977, allocated 5 percent of federally collected revenue to local government.

The intentions of the 1976 reform were debated by the constitution drafting Committee and the Constituent assembly in 1978. The result is that the 1979 constitution reaffirmed the *development* function as provided for in Section 7, Subsection 3.

It shall be the duty of a local government council within the State to *participate in economic planning and development* of the area referred to in subsection (2) of this section and to this end an economic planning board shall be established by a law enacted by the House of assembly of the State.

In addition, Section Seven of the 1979 Constitution provided for a democratically elected local government councils for the country. Unfortunately, during the

Alhaji Shehu Shagari regime (1979-1983), the constitutional provisions were neglected. No elections were held and sole administrators were appointed. (Igbuzor, 2007)

5. The Military and Local Government Administration in Nigeria

The allocative role: This is the allocation of resources in the best possible manner that will bring maximum efficiency. Market failure leads to distortion in economy. It is the responsibility of government to bring the distortion into order and curtail the activities of monopoly power in the economy.

The distributive role: Government has got to balance efficiency with equity in the allocation of resources by using taxation, social security and the distribution of public sector services to influence the distribution of income. The military has played a dominant role in the history, politics and constitutional development. The Mohammadu Buhari regime (1983-1984) continued with the system of sole administrators. During Babangida regime (1984-1992) there were certain reforms aimed at ensuring local government autonomy. These included the abolition of the Ministry of Local Government; establishment of executive and legislative arms in local councils; and direct allocation to local government without passing through State government. The regime also increased local government statutory allocation from 15 percent to 20 percent with effect from 1992. It is important to point out that the intergovernmental relations between the Federal, state and local government has been characterized by both co-operation and conflict; but it is conflict that has predominated State-local Government relations. Some state governments have been known to have hijacked and diverted Federal government's allocation to local governments. This is why one of the features of the reform during Ibrahim Babangida's regime was to make allocations directly to local governments without going through state government. (Igbuzor, 2007)

6. Impact of Local Government Administration on the Economy:

The following has been identified (Bhatia, 2006 and Bailey, 1996) as the main economic roles of government at whatever level:

1. *The Allocative role:* Resources accruing to government are allocated to ensure maximum efficiency of factors. Market failure will not allow the price system to allocate resources in the best of ways that will guarantee *Pareto optimum*. So it is incumbent on government to tamper with macroeconomic variable to ensure optimal allocation.

2. *The distributive role:* Government balances efficiency with equity in the allocation of resources through the use of tax instruments, social security and distribution of public sector services.

3. *The regulatory role:* The government legislates and enforces laws of contract, consumer protection, justice and so on, in order that the market economy may function.

The Stabilisation role: Government uses macroeconomic tools to regulate the economy and stabilize it in order to minimize fluctuations in the economic activities.

7. Functions of Local Government Council:

The Nigerian 1999 Constitution in Section Seven made provision for the establishment of local government system and the functions to be performed by the local government councils are highlighted in the Fourth Schedule of the Constitution (Federal Republic of Nigeria, 1999).

1. The main functions of a local government council are as follows:

- a. The consideration and the making of recommendations to a State commission on economic planning or any similar body on-
 - i. The economic development of the State, particularly in so far as the areas of authority of the council and of the state are affected, and
 - ii. Proposals made by the said commission or body;
- b. Collection of rates, radio and television licences;
- c. Establishment and maintenance of cemeteries, burial grounds and homes for the destitute or infirm;
- d. Licensing of bicycles, trucks (other than mechanically propelled trucks), canoes, wheel barrows and carts;
- e. Establishment, maintenance and regulation of slaughter houses, slaughter slabs, markets, motor parks and public conveniences;
- f. Construction and maintenance of roads, streets, street lightings, drains and other public highways, parks, gardens, open spaces, or such public facilities as may be prescribed from time to time by the House of Assembly of a State;
- g. Naming of roads and streets and numbering of houses;
- h. Provision and maintenance of public conveniences, sewage and refuse disposal;
- i. Registration of all births, deaths and marriages;
- j. Assessment of privately owned houses or tenements for the purpose of levying such rates as may be prescribed by the House Of Assembly of a State; and
- k. Control and regulation of-
 - i. Out-door advertising and hoarding,
 - ii. Movement and keeping of pets of all description,
 - iii. Shops and kiosks,
 - iv. Restaurants, bakeries and other places for sale of food to the public,
 - v. Laundries, and
 - vi. Licensing, regulation and control of the sale of liquor.

2. The functions of a local government council shall include participation of such council in the Government of State as respects the following matters-

- a. The provision and maintenance of primary, adult and vocational education;
- b. The development of agriculture and natural resources, other than the exploration of minerals;
- c. The provision and maintenance of health services; and
- d. Such other functions as may be conferred on a local government council by the House of Assembly of the State.

8. Sources of Local Government Revenue:

Local governments derive their revenues from various sources. The sources will be classified under two broad categories, namely internally generated revenue and externally generated revenue:

Internally Generated Revenue (IGR):

These are taxes, rates licences, fees and fines earnings from commercial undertakings, rent on local government property, interest repayment and dividends grants. It

should be noted that this internally generated revenue sources are not fully exploited by most local governments. In most cases they do not constitute more than 10% of total revenue accruable to the local government as they rely solely on the monthly allocation from the Federation Account to meet their obligations. In some cases, like the one reported in yesterday in the papers that a local government in this stae presented a budget of N1. 139 Billion which is made up of N1.121 billion statutory allocation and N17. 959 million. In this case the IGR is less than 2%. (*The Punch*, 2009). One wanders what becomes of such local government without allocation from the federal government.

Externally Generated Revenue

Allocation from Federal Account: Statutorily since the local government reforms of 1976, the federal government is compelled by law to make allocation to local governments from the Federation Account. This allocation is based on a formula enacted by the National Assembly. The present formula gives the local government 20% of total amount accruing to the Federation Account.

Allocation from the State Account: States from time to time make allocation to the local governments under their jurisdiction in form of grants, counterpart funding or assistance from their own accounts. The Constitution makes provision to the effect that Stae governments shall be involved in the finance of each local government. It empowers the state government to maintain a special account to be called the State Joint Local Government Account into which shall be paid all allocations from the Federation Account.

Private Sector Funding: Local governments receive funds from organised private sector and spirited individuals to execute their projects. This comes mainly in form of grants and donations.

Other External Funding: Funds are also received from local and international Non-Governmental Organisations who sponsor projects at the grassroots.

Value Added Tax (VAT): This allocation comes from the Federal Government and it is based on total amount of such taxes generated from the locality.

9. Corruption in Local Government Administration:

Nigerian public and private sectors of the economy are riddled by high level rate of corruption. The local government system has its fair share of the cankerworm. The level of corruption prevalent in each of the local government depends on the style and form of administration that is in place in the local government. Local governments have the haculean task of convincing the generality of the populace who have the belief that local governments' allocations are shared by the officials, political godfathers, cronies and errand boys and girls. Local government accounts were hardly audited in the past. Where audited the kind of exchange of envelopes that goas with such exercise made it mere routine that has no consequences on the future behaviour of council officials and operators. Corruption is anti-development and development can hardly take place in an environment where corruption is the order of the day.

Corruption at the local government level has been extensively discussed and documented by Aluko (2006). It comes in various forms and dimension. They include :

- i. Funding of political parties.
- ii. Inflated contract prices or quotations.

- iii. Collusion between external auditors and government functionaries.
- iv. Collusion between supervisory ministries/bureaux and local government chairmen.
- v. Collusion with citizens who benefit from thieving public officers.

The above are manifested in form of falsification of records of transactions, loss of vouchers and some other financial documents, diversification of funds, release of funds for jobs not properly done or non-existing jobs, etc.

10. Organ of Administration or Development?:

One of the main reasons for the establishment of local governments is to bring development closer to the people at the grassroot. Federal impact on the society is more felt globally by the citizens as compared to direct impact the activities of local governments have on the locality. Also state government's impact cannot be far reaching when compared to that of the local government.

It can be said without mincing words that local government is both an administrative organ as well as development organ. It is an organ of administration because it is the process that needs to be put in place for development to be achieved. Administration is necessary as a tool for the execution of the development programmes of the local government. Without solid administrative machinery in place, it will be difficult for development to take place. The goal of every local government is to execute development programmes that will make life more abundant for its citizens. This can only be possible if there is effective and efficient administrative structure that will propel the government to achieve the goals.

11. Improving the Impact and Attaining the Millenium Development Goals:

The Millenium Development Goals (United Nations, 2006) aims at achieving the following: eradicate extreme poverty and hunger; achieve universal primary education; promote gender equality and empower women; reduce child mortality; improve maternal health; combat HIV/AIDS, malaria and other diseases; ensure environmental sustainability; and develop a global partnership for development.

Acursory look at all the eight goals reveal clearly that they are all development issues that will enhance the quality of life of the citizens. Local governments have a lot of roles to play in achieving them. The main functions and roles of local government reveal that specific duties are to be performed in the area of education, basic health delivery, environmental sanitation the care of children and women. These are the main thrusts of the millenium development goals (MDGs) and local government structures and services are better positioned to attain the goals.

12. Conclusion:

We see from the above that Nigeria has come a long way in evolving an enduring local government system. The ultimate objective of government is to provide socio-economic infrastructures that will improve the quality of life of its citizens, Achieving this objective requires that effective and efficient administrative system must be put in place, So it is clear that for development to take place there must be effective and efficient and corruption-free administrative system, Therefore local government in Nigeria is both administrative and development organ.

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