THE TRADITIONAL SETTLEMENT PATTERNS IN THE JOS METROPOLIS AND THE CHALLENGES TO THE "GREATER JOS MASTER PLAN" OF THE 21ST CENTURY.

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ABSTRACT
Before its growth to urban status, where today, is called the Jos metropolis had been settled by indigenous populations (Berom, Anaguta, Rukuba and Afizere). As elsewhere in the Middle Belt area, Jos was dotted here and there with traditional settlements linking one settlement to another by narrow footpaths. The advent of colonialism and attendant mining activities introduced into the Jos area some semblance of modern settlement, with wider motorable roads. However, this development had continued but at a "snail pace". The problem today is how a truly modern pattern of settlement can be developed, to replace the stubbornly surviving traditional settlement pattern. The problem has lingered through the ages with one master plan to another, with just some minimal successes. This has triggered in the following questions: what has been the actual problem besetting the implementation of the Greater Jos Master Plan? What does the Greater Jos Master Plan involve? What has been the reaction of the indigenous populations to the plan? These and many more constitute the focus of this paper. The method adopted here involved the use of questionnaire, administered to selected elders of the Jos metropolis and staff of the Ministry of Land Survey and Town Planning. Responses were matched against a few existing written reports for objective appreciation of the problem and what suggestions can be made. The findings showed that in addition to reluctance to pay compensation, there has never been a programme of enlightenment.

INTRODUCTION
Rapid urbanization and population growth have caused many problems in developing countries. In Nigeria, cities grow too

rapidly with resources not able to keep up with the increasing population. Housing is one of the major problems these cities are facing today. Migrants who cannot afford proper housing are forced to build temporary structures without proper utilities. (Kudu, 2018). The National Population Commission (NPC) has put Nigeria's current population at 198 million people, with urban population growing at an average annual growth rate of about 6.5 per cent. Certain push and pull factors have contributed to rural-urban migration within Nigeria and this continuum accounts for over 55% of population growth (Toye et al., 2013).

Nyambo (2010) observed that the inability to bring about sustainable development has always reflected in the lack of sustainable urbanization and appropriate planning approach and implementation. The major problems have always been rapid growth of urban slums and urbanization of poverty as well as poor conservation of natural environment. Abuja (in Nigeria) has the highest level of urbanization in Africa, and the Jos metropolis, due to its proximity to Abuja is already experiencing the spillover effect, which has a direct bearing on the socio-economic and demographic, as well as cultural characteristics. The current institutional framework of urban and regional planning system (Master planning) in Nigeria (including the Jos, Metropolis) cannot adequately address the urban problem of urbanization and its physical characteristics (Oyesiku, 2004; Agbola, 2004; Alabi, 2008). This is necessitated by the social, economic, environmental and political constraints in the urban planning procedures in the metropolis. Hence, an effective urban planning system is required to address the urban sprawling and its characteristics in the metropolis.

Good governance brings about good planning and helps in achieving the Millennium Development Goals, through the effective

implementation of the urban and regional plans, particularly where land is adequately supplied for development, accommodating investment and working with the less privilege to improve the standard of living of the people. Physical planning strategies are geared towards identifying and targeting development needs, e.g. conserving the available priorities, risk, opportunities and gaps in the urban and regional areas. Physical planning shouldn't be seen as a static blueprint plan, but an attempt to understand the social, economic and environmental resources within different areas considering their peculiar nature, while providing linkages within and between urban and regional areas as well as upgrade of infrastructure. Effective planning and management of most urban and regional areas would help in bridging the dichotomy that exist between the rural and urban by increasing accessibility between the two for the benefit of both. A strong planning system, based on up to date plans, emerging from current information is needed to address the situation in most African countries because of its dynamic nature. Hence, sprawling conditions characterized by fast-growing slums make the problem grow rather than diminish (Amanda, 2009).

The Study Area
The study area is Jos metropolis, Nigeria. It lies within latitudes 9°45'00"N to 09°57'00"N and longitudes 8°48'00"E to 8°58'00"E. Jos is the administrative capital of Plateau State. The study covered parts of Jos North and Jos South Local Government Areas (LGAs). Jos North and South have population of 429,300 and 306,716 respectively based on the 2006 National Census. Jos metropolis covers an area of 249.7km². At an altitude of 1,217m (3,993ft) above sea level, Jos enjoys a more temperate climate than much of the rest of Nigeria. The climate is the wet and dry type classified as tropical rainy climate and characterized by a

mean annual rainfall of 1,250mm, peaking between July and August. The mean annual temperature is about 22°C but mean monthly values vary between 19°C in the coolest month of December and 25°C in the hottest month, April. The city of Jos is the largest settlement in Plateau State. It owes its origin to the introduction of tin mining on the Jos Plateau and railway lines linking it with Port Harcourt and Lagos, thus bringing the area into the orbit of the world economy. The tin mining led to the influx of migrants, mostly Hausas, lgbos, Yoruba's and Europeans who constitute over half of the population of the town, making it a highly cosmopolitan.
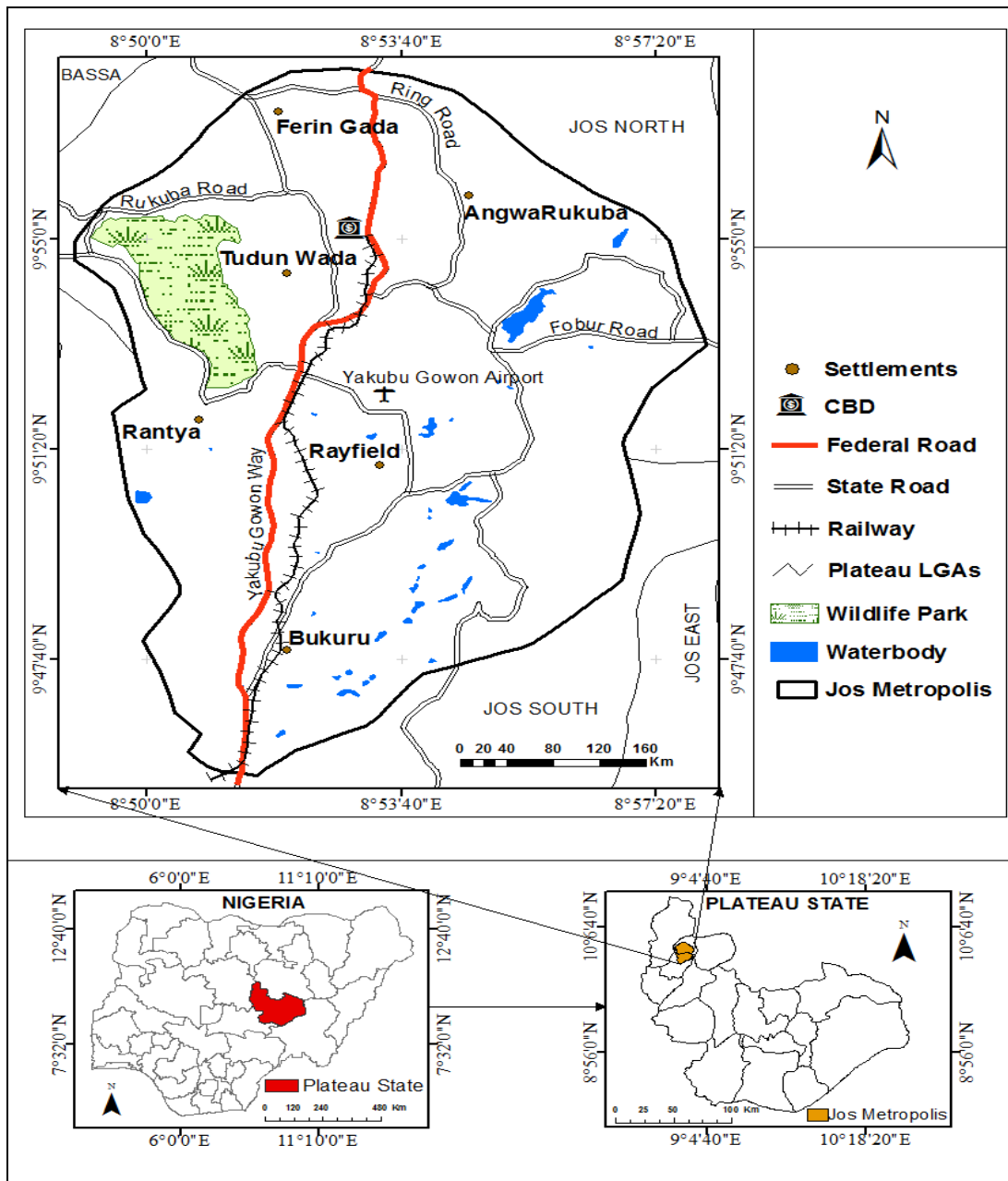
Figure 1: Jos Metropolis

Accessibility to land and Compensation

The Nigerian Land use Act of 1978 abolished the existing land tenure systems and replaced them with a uniform Land Administration system across the Country. Prior to the Act,

there were three land tenure systems. These were the customary land tenure which was essentially based on the customs and traditions of the various communities, with the Chief, community or family head holding the land in trust for family or community use; the non-customary, based on the received English Law (operational mainly in the then Lagos Colony), which vested the land on the British Crown, but also allowed for either free-holding or lease-holding, with tenured occupancy; and special native-favoured system of Northern Nigeria, which put the land under the control of the Governor for the use and benefit of the Natives of the Region (Salami, 2014). All the existing tenure systems encouraged land holding without an obligation to develop them, fragmentation and uncoordinated alienation, hoarding speculatively for value appreciation and without precise documentation. The Land Use Act was therefore designed to achieve the following objectives;

1. Make land easily accessible to all Nigerians
2. Prevent speculative purchases of communal land
3. Streamline and simplify the management and ownership of land
4. Make land available to government at all levels for development
5. Provide the system of Government administration of rights that will improve tenure security (Salami, 2014).

If these objectives were achieved by the Act ultimately, the questions to be addressed is whether the challenges posed by the Land use Act for housing and the overall investment in property development were operation-induced or perpetrated by the provisions therein.

Issues arising from compensation agreements are enormous due to the fact that there are no clear-cut parameters set as to how and when compensation shall be made. High cost of compensation becomes inevitable especially where a settlement has grown in terms of buildings (residential, industrial, educational,

commercial etc.). Things get even worse in cases where the government fails to make proper plans and arrangement for decent relocation alternatives for residents who might likely be displaced, as a result of the implementation of master plans. Research has shown that where resettlement was done in the case of displacements, the new settlement are lacking in the provision for the displaced persons with some of the basic needs for daily living (electricity, good roads and potable water supply). In most cases their social lives too have been affected as close ties with friends and family might have been broken. Some of these resettlement schemes have also led to the loss of farmlands, jobs and other sources of livelihood.

Nature and Patterns of Traditional Settlements

Human settlement is principally about the conceptualization, and use of, terrestrial space by a group of people in order to effectively address issues bordering on variables such as economy, security, peaceful co-existence, aesthetics and symbolism either in one time period or several time periods. It is the end product of a set of conscious efforts by a group of people to transform a natural space to a cultural experience in order to survive and make progress rooted in the world-view and social history of its members. A careful study of a given human spatial order, either at the archaeological level or in an ethnographic context, is capable of deepening or clarifying our understanding of the internal organization of the settlers as they adapt and re-adapt (whenever there is need to do so) with the passage of time to a set of environmental challenges (Ogundele 2004).

Settlement as a component part of human culture is highly encyclopedic in character and scope because it straddles the spheres of material and nonmaterial worlds. Not unexpectedly, studies of human settlements are robustly embedded in the

domains of such subjects as archaeology, cultural/social anthropology, geography and Town Planning. However, each of these subjects has its own array of methodological approaches and perspectives for capturing the essence of human settlements. It is a truism that while the archaeologist examines settlements from a macro-time perspective (diachronic orientation), the remaining specialists describe and explain them (settlements) within a micro-time scale or synchronic framework. The idea of housing came as an objective of fulfilling one of the basic needs of man principally in the provision of shelter, security and comfort. In the practical establishment of homes, the planning and construction takes a pattern or form, which varies from society to society and from country to country. Consequently, the form of housing chosen or built offers a direct insight into the study of various cultures and societies.

Nigeria as a nation for example, is a heterogeneous society comprising of ethno-geographical region like the north, middle belt, east, west and south. Each of these regions has its own culture and as such exhibits peculiar housing form. Consequently, the Nigerian traditional architecture differs not only temporarily but also spatially and from one period to another. The latter is obviously due to trend of civilization, cultural infiltration and technological advancement. It is natural that certain architecture is identified with certain group of people either as a state or nation. For example, there is the Chinese architecture, the American, the early Egyptian, the Greek, the Roman and so on. Within this sphere of national architecture, there exists architecture of specific functions. Consequently, the Chinese pyramidal cake form is a depiction of temples, whereas the ordinary linear design is reserved for housing, while in America, the simple wooden architecture is peculiar cottage buildings.

Architecture in this dimension could be seen as the art of design of buildings and structures for convenient human habitation and utilization, considering such factors as the variation in norms and social values for the attainment of social comfort in different societies. The tendency in exhibiting these values and the character of life, coupled with factors like the materials available and the use of building, significantly suggest the kind of design for the function in this society. The architecture evolved depicts the "language" the society in question can understand. A good architecture must satisfy a trinity of requirements in a user, that is, his physical needs (satisfactory body reaction of feeling), his emotional needs (aesthetic and psychological) and his intellectual needs (logic, orderliness and flawlessness); hence the appeal for architecture to be both art and science (Astrolabe, 2002). The nature and pattern of settlements in the Jos town metamorphosed as a result of unconscious planning. The inhabitants adopted a form of development without any futuristic idea of possible transformation, and this form of development cannot be integrated or fused into or form part of the greater Jos Master Plan. The only possible option for the implementation of the Greater Jos Master Plan in the Jos town including immediate neighbourhood is total clearance of buildings, and this would be capital intensive.

The Greater Jos Master Plan
Master plans are evolving long-term planning documents that establish realistic plans for implementation based on subsequent approvals by public agencies. A master plan identifies sources of funding and the strategies needed to build the various structures under consideration and will make recommendations, via a management plan adopted to maintain it. In addition, a master plan describes the development schedule, highlighting the order in which elements and decisions are made. It would

also establish guidelines for the many designers who will be employed to draw up specific plans for the sites. Master plans may also include images of different land uses to demonstrate the character and key features of each site. Once a master plan is in place it should give way to local plans which will provide a more detailed basis for development control. Most parts of urban areas are occupied by slums that are in need of urban renewal. In Nigeria, a number of known master plans which include; the Abuja Master Plan (1978), Enugu Master Plan, Structure Plan and satellite towns for Onitsha amongst others, are born out of the need for urban renewal (Source).

Similarly, in Plateau State, the master plans for major urban areas (Greater Jos Master Plan, Riyom Urban Master Plan and Angware Urban Master Plan) have either not been reviewed or have not been implemented. Presently, the government is making efforts to consider the formulation and review of a number of policies to bring about controlled urban development and management. The impact of Planning Authorities in terms of development control should be examined by observing proportional and controlled urban development and management within any giving jurisdiction. Many factors militate against this ranging from economic, social, political, cultural and physical.

Characteristics of Master Planning

A Master Plan is a comprehensive long-range plan intended to guide the growth and development of a community or region, stating clearly the analysis, recommendations, and proposals for the population, economy, housing and basic infrastructure as well as land use. It is based on public input, surveys, planning initiatives, existing development, physical characteristics, and

social and economic conditions (Mabogunji, 2001; Encyclopedia Britannica, 2011).

Table 1: Characteristics of Master Planning

S/N	Characteristics
1	For the restoration of human dignity through order to the city and to ensure planned present and future growth.
2	The creation of total physical environment which is functional, efficient, healthful and aesthetically pleasant for human activities.
3	It helps in policy effectuation at all levels of its application.
4	Though it has always been long- range, with the appropriate phasing, the plan is said to provide a task for each period within its implementation period.
5	It serves as practical working guide to the legislators in making everyday decision (Black, 1975:13).
6	That through it politicians can know the articulated priorities of the communities on that basis.
7	Master plan has been associated with proposal for restructuring existing urban areas and cities.

Source: Local government Association, 2001, Mabogunji, 2001, ODPM, 2006

According to Suleiman, (1986) the advantage of the Master Plan lies in its physical components, land use; circulation, housing, provision of facilities, utilities and services; open spaces and urban design. The comprehensive Master Plans were prepared for cities such as Washington D.C and many others in USA. These planning approaches were imported to Nigeria and some other developing countries and used as planning strategy (Agwu, 1998, Jiriko, 2007). However, these were not appropriate planning

approaches to address the physical planning problems in these developing countries, due partly to the dynamic nature of the populations in such areas, absence of institutional frameworks, the urban planning systems on ground that is characterized by inadequate man power, inadequate funding and inconsistency in government amongst others.

Challenges and Forms of constraints to the Greater Jos Master Plan

For the purpose of this paper, eight categories of constraints have been identified and they include; institutional, financial, cultural, political, physical, knowledge, legal and analytical constraints. These could be internally or externally induced to constrain the urban planning system (Hambleton, 1978, Gupta, 2001, Ebohon, Field & Mbuga, 2002, Goldratt. 2004, Dung Gwom, 2008). This section has demonstrated how the constraints are caused, the form of the constraints and how they have affected the design and implementation of the Greater Jos Master Plan.

Political Constraints

The practicality of making policy issues work is not always seen when meeting with politicians. Policy implications are always considered to be economic strategy – expanding government spending, even beyond government revenues, because in times of recession, expenditure is drastically reduced (Vidal, 2008). There are always lessons to be learned; it is not any easier to raise levels of expenditure than to reduce them. Every time policy makers create a government programme, the programme creates its own constituents. As a result, even when its usefulness is in question, closing it down often becomes nearly impossible. This has always been the major constraint experienced by many countries in trying to implement their policies (Gupta, 2001; Ebohon, Field & Mbuga, 2002; Goldratt, 2004).

This situation is a direct result of a number of policies that conspired powerfully to encourage urban dispersal, (Duany et al, 2000). Jos Metropolitan Development Board (JMDB) was established in 1975 to address the issue of non-availability of land for government use, at the same time a number of Planning Authorities were established such as Jos Metropolitan Development Board (JMDB), and given the responsibility of controlling development in urban areas and their periphery (JMDB, 2006). In Plateau State, a whole ministry – Ministry of Urban Development was created and the Departments of Lands were instituted in the local government secretariats. For the planning authorities to be functional they should demonstrate the good commitment and zeal to governance. The World Bank Report (2006) considers; participation and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law and the control of corruption to be good indicators of determining urban development and management.

Stewart, (2006) considered the fact that for good urban governance to be achieved citizen participation has to be considered. This has become very important to allow planning authorities to carry out and implement the plans for the given area, because the plan that is to be implemented is their contribution and opinion. However, some citizens perceived that they were discriminated against permanently, or almost permanently, by being excluded from participating in their own local governments. This concern is tied to the issue of the plan preparation and implementation by planning authorities. The result is failure of the plan to be implemented because the plans are created for the people, instead of with the people, by denying the residents their contributions. The concept of "persistent

defeat" illustrates that the failure of plans is due to implementation not being achieved.

This case is similar to current cases in respect of the consideration which should be placed on inhabitants (citizens) being totally involved at all stages in the planning process, to ensure that plans are developed together with the people and not for the people. When comparing the "institutional deficiency theory" to "persistent losing" theory, it shows that there is a failure in the system. A case can be made for the adoption of other planning methods to address the problem. Good governance can be indicated by such things as citizen participation and if the new planning method can demonstrate good governance then it is considered to be appropriate for adoption and implementation of a plan. Some of the other indicators are effectiveness, equity, participation accountability and security (Hambleton, 1978, Stewart, 2006). This is synonymous to urban management, as governance is achieved through a system that relates to different sub-systems for the benefit of the entire system. This now links us to consideration of the effectiveness of ministries, boards and sections to achieving their goals and ensuring the implementation of plans for urban governance and management, and the next section will provide an explanation for further clarification.

Cultural Constraints

Culture is that invisible and often complex system of beliefs and practices that determines how people act in organizations and which is often fraught with difficulty. Gupta, (2001) observed that just like political constraints, the cultural context influences the public process. Public policies must conform to the cultural norms of the community, from design to adoption and successful implementation. Cultural context is perplexing because it varies

from one country to another. The acceptance of a policy by members of a community will go a long way to ensuring the implementation of a policy (e.g., birth control). Members of the community might also question those who oppose international abortion and birth control initiatives, even as the United Nations population control programmes in poor, or less developed countries buckle under unsustainable growth (Ebohon, Field & Mbuga, 2002; Goldratt, 2004; Vidal, 2008). Without cultural acceptance, even a perfectly reasonable public policy may not be considered appropriate for a community or country.

In a related study Timothy Galpin (1996), proffered 10 cultural components to be considered when implementing change:

Table 2. Cultural Components to Consider When Implementing Change

	Components	Descriptions
1	Rules and Policies	Eliminate rules and policies that hinder the change and create new ones that reinforce the desired way of operating. Develop and document new SOP's.
2	Goals and Measurement	Develop goals and measurements that reinforce the desired changes
3	Customs and Norms	Replace old ways of doing things that reinforce the old ways with new customs and norms. E.g. replace written reports with face-to-face meetings.
4	Training	Again, replace training that reinforces the old way of doing things with new training. Develop experiential training that provides real time, hands on experiences with new processes and procedures.
5	Ceremonies and Events	Put in place ceremonies and events that reinforce the new ways. Recognize individual and team contributions to making the changes work

6	Management Behaviours	Publicly recognize and reward managers who change, by linking promotion and pay to the desired behaviours. Do not promote or pay increases to managers who do not come on board.
7	Rewards and Recognition	Make rewards specific to the change goals that have been set. Ensure that the performance management system recognizes and rewards the desired ways of operating and does not simply reinforce the old ways. For example, a performance management system that measures only individual behaviour will undermine any attempts to inculcate a culture of teamwork.
8	Communications	Deliver communications in new ways to show commitment to change. Use multiple channels to deliver consistent messages at all stages during the transition, before, during and after.
9	Physical Environment	Make sure the physical environment reflects the change. If knowledge and information sharing is your goal, get people out of offices and into open, shared areas. If you want them to talk to their customers, create 'virtual' offices so that your people are encouraged to work outside the office with customers.
10	Organizational Structure	Make sure that structure reinforces the operational changes. Combine overlapping divisions; re-organize around customers as opposed to functions.

Source: Compiled by Author from Hambleton, 1978; Galpin, 1997 & Gupta, 2001.

Institutional Constraints

Public policy depends on bureaucratic institutions for its formulation and implementation. An organization, like any other entity – collective or individual – develops its own cultural ethos,

goals and mythology as observed by Ripley and Franklin, (1982); Gupta, (2001); and Ebohon, Field & Mbuga, (2002). Policies are only promoted by the social services division of a city who come into direct conflict with the mandates of law enforcement branch. These conflicts, often seen as 'turf battles', can render a policy ineffective. Gupta, (2001) and Ebohon, Field & Mbuga, (2002), observed that commerce departments promote international trade and seek to maximize the export of goods from their country. The goals might be different to those of the state department, which manages the country's foreign policy and for many reasons, such as politics the state department may affect companies from selling their wares, such as weapons or high-speed computers. This institutional restriction becomes a constraint by not supporting and facilitating the infrastructure delivery to promote sustainable urban development as observed by Ebohon, Field & Mbuga, (2002).

Most metropolis in Nigeria are just like any other municipal area councils in a developing country which have not benefited from the contributions made by regional development plans because management is via Planning Authorities, using policies made for them, to achieve different goals that relate to Physical Planning. Master Planning, as a policy tool and technique, to solve physical planning problems in a regional arena has failed. The absence of Master Planning frameworks to address various issues has not been considered, in addition, the approval of a plan proposed by government, may have to go through lengthy procedures and could then be incorporated into the relevant section of a plan, (Premus, 2004; SCP and NHP, 2006). This is to promote sustainable, spatial development for a region, state and the country at large; this cannot be over emphasized for the survival of a nation, (Chalwa, 2001; Ebohon, Field & Mbuga, 2002). Jos Metropolis is one of the fastest growing cosmopolitan regions in sub Saharan Africa; it

lacks a framework for the implementation of any plans to control urban development and management.

Financial Constraint

Ebohon, Field & Mbuga, (2002) observed that the role of effective financial institutions in economic development has been the subject of considerable debate because it remains crucial to any form of growth and development, if mobilized for "immense works" it plays a critical role in igniting industrialization and other forms of advancement; thus, the lack of effective financial institutions becomes a constraint. A plan that is expected to trigger further but fails to include details of funding will struggle to be successful. A plan should clearly show or indicate all sources of funding, cash flow analysis and income generation capacity and management. The Government must explain how a plan will be financed if the plan is to be implemented. The implementation of plans is an intensive project and requires funding from the Government or institution that initiated its preparation (Hambleton, 1978; 266; Gupta, 2001; Goldratt. 2004). Furthermore, the Government has to adequately fund the Planning Authorities responsible for the implementation. Lack of funding is a major constraint that has impeded the implementation of the Master Plans. The inability of the Government to fully fund the implementation of plans has resulted in the stated goals of the numerous plans being unachievable. This is manifested in the non-provision of equipment, qualified personnel or lack of funding in form of grants or scholarships to train the workforce.

Legal Constraints

Public policies (plans) must be formulated and implemented within a nation's legal framework. Generally speaking, in the U.S., law originate from six sources that govern the daily running of the

country and encompass: constitutional laws, laws prompted by legislature, executive orders, interpretations of law by the judiciary, agency or organizations rules and public referenda. In our democratic system of checks and balances, laws passed by legislature, executive orders, referenda and agency rules can all be declared null and void by the courts. In certain cases, the legislative division may contest with the executive division for control of the national agenda. For instance, the U.S., Congress passed the war powers resolution in 1973 which curtailed the president's entitlement to send U.S's troops into combat with other countries (Ripley and Franklin, 1982). A hugely popular referendum may face court challenges that block its execution (Gupta, 2001; Ebohon, Field & Mbuga, 2002; Goldratt, 2004). This legal restriction becomes a constraint when a recently designed plan/policy has been sent to Congress for adoption and is delayed. In the design and implementation of any plan or policy, it is very important that potential constraints should be identified; constraint is the element, factor or sub-system that works as a bottleneck. It restricts an entity, project or system (such as a manufacturing or decision-making process) from achieving the full potential (or higher level of output) in relation to the set goals (Hambleton, 1978; 266; Schragenheim and Dettmer, 2000; Goldratt. 2004). Constraints are basically a restriction on planning based on; limiting resources, laws and regulations and the need to avoid harming a system. A good plan will avoid the undesirable consequences of any actions.

In the context of Nigeria, cities operate under the 1992 urban and regional planning procedures that apportions the state the power to prepare a master plan for urban cities in state capitals, hence, the issues raised in Nigeria (urban, cities) are all common to the Jos Metropolis, issues linked to the explosion of spatial coverage due to the urbanization processes that allow

encroachment onto nearby agricultural land, where land use control is grossly ineffective (Olatubara et. al., 2004), and poor urban management practices abound.

Knowledge Constraints

Hambleton, (1978); Gupta, (2001) observed that public policies are, ultimately, constrained by peoples' existing knowledge, because if people are made aware of the failings of past policies the more such errors can, globally, be eliminated. A good illustration is the problem of malaria abatement in many countries around the world. Malaria was once the biggest cause of death in the world's tropical regions. However, as soon as scientists learned that the disease was spread by mosquitoes, a huge international campaign was launched to eradicate the stagnant, swampy areas thereby removing insect breeding grounds. Spraying massive doses of the insecticide DDT, freed many less-developed countries from malaria's scourge, but within decades people began to notice the chemical's devastating effects on the ecology of marshland, which is essential for the survival of many species of *flora* and *fauna*. Again, policies had to be developed to eradicate not the diseases, but the effects of past policy. As these devastated habitats were restored the disease returned, often with a vengeance. This illustration has shown how limited knowledge of the eradication of insects brought about a heavier penalty and more constraints into addressing the problem.

Analytical Constraints

Analytical techniques use numbers for public policy/ plan analysis, either at the design stage or at the implementation stage. Numbers have a magical quality, they give the impression of being totally objective, as observed by Hambleton (1978); Gupta (2001), however, there are many opportunities for subjectivity to creep into analysis because there is always the qualitative dimension of

analysis. The statistical methods or the various techniques researchers use for analysis could exclude the impartiality of scientific reasoning. Objectivity, in order words, relates solely to deriving the conclusion once the problem becomes apparent. At each stage of the design, researchers and analysts are always confronted with confusion and enormous pressure to make quick decisions, which are often rendered for the convenience of the analyst or to suit the particular quantitative technique chosen for the analysis. These analytical constraints may creep into the analysis from a number of sources, hence, affecting or restraining a number of issues relating to the plans either at the design or implementation stage (Hambleton, 1978; Schragenheim and Dettmer, 2000; Gupta, 2001; Goldratt, 2004). The question that arises in the research is what constraint is posed by the analysis at the design and implementation stage of the master plan? Constraints regulate the output of the whole process. First, one needs to understand "demand". Demand is not what the researcher wants, although often it feels as if the researcher does not understand constraint management. Demand is the rate at which one needs to run the process to meet set targets in a planning process. In spatial planning design and implementation, it is very important that the potential constraints should be identified at the initial stage of the design before implementation.

Physical Constraints

The physical characteristics of different locations determine, to a large extent, the planning of developments within the chosen area, for instance, rocky outcrops, mounds, streams and mining ponds can significantly influence physical developments in a city and its environs, which tend to leap-frog cross areas that are difficult to build upon. This remains a problem because of the use of poor-quality technology, which is unable to cope with the

difficult topography of some areas. Dungwom, (2008) observed that physical constraints (rocky outcrops, mounds, streams and mining ponds), have significantly influenced physical developments in cities and in peri-urban areas that have been avoided because of the difficulties of building in problematic areas.

CONCLUSION

This paper has critically assessed the master planning system and its constraints on planning authorities in Jos metropolis of Plateau State, by identifying and examining the traditional settlement patterns, characteristics as well as the effectiveness of master planning system in Jos metropolis. Having operational land use management policies which will help planners provide livable environments for urban residents is very important, but having to achieve through a good people-oriented design and government willingness to be part of the effort. The following conclusions were arrived at:

1. The master planning system and approach is an out-dated means of planning as it is design for a static or slow growing population such as that obtained in developed countries where population and physical developments are controlled.

2. The planning approach has not been effective for the Jos metropolis to allow the needed growth and development, from the previous greater Jos urban master plan to the present owing to the fact that developing countries (including Nigeria) have a high rate of growth and development that is not controlled.

3. That some decrees such as (Land use decree 1978, 1947 TCPL, the 1992 Urban and regional planning) are obsolete and form a barrier to effective implementation of the master plans designed without considering such vital decrees and laws.

Based on the aforementioned, the following recommendations are offered to guide future urban development in conformity to the growth rate within the region;

1. There should the immediate adoption of Spatial planning based on its comprehensiveness, flexibility, timeliness and people-oriented approach

2. There should be regular updating of these Master plans, planning laws and decrees or better still adopt a better planning approach e.g Spatial Planning.

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