



POLYTECHNIC OF NAMIBIA

HARALD PUPKEWITZ GRADUATE OF BUSINESS

**THE DETERMINANTS OF EFFECTIVE AND EFFICIENT LAND DEVELOPMENT
AND DELIVERY SYSTEM IN WINDHOEK**

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DECLARATION

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DEDICATION

I wish to dedicate this thesis to my wife and children.

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ABBREVIATIONS

ASDM	Alternative Service Delivery Models
CoW	City of Windhoek
DO	Deeds Office
DSDM	Direct Service Delivery Model
DSM	Directorate of Survey and Mapping
GIS	Geographical Information Systems
LIS	Land Information Systems
FLTS	Flexible Land Tenure System
NGO	Non-Governmental Organisation
NHE	National Housing Enterprise
NLIS	Namibia's Land Information Systems
PSDM	Privatization Service Delivery Model
PPP	Public-Private Partnerships
PFI	Public Finance Initiatives
SGO	Surveyor General's Office
UPI	Unified Parcel Identifier
UNDP	United Nations Development Plan
WCC	Windhoek City Council

ABSTRACT

The main aim of this thesis was to find out the determinants of effective and efficient land development system in Windhoek. With increased movement of population in search for better settlement and employment, more people tend to be concentrated in urban areas. This thesis identifies the dynamics of land for urban housing in Namibia with specific reference to the city of Windhoek. The thesis remarks on one hand, weaknesses in the existing institutional framework for urban planning and delivery of land services, unnecessary prolonged procedure and actors in the process with overlapping authorities, roles and lines of accountabilities has been identified as contributing factors to such dynamics, on the other hand, lack of technical capacity, limited financial resources embedded with cumbersome procedures in the whole process of preparation and approval of detailed plans as prepared by land experts has been a catalyst for the low capacity of the municipality in allocating land for housing development to the developers. With the increasing influx of population towards the city of Windhoek, land servicing and delivery models need to be reformed to take into account the rapid population dynamics within the society. Municipalities need to be empowered with both technical and financial capacity to facilitate in provision of effective and efficiency services of providing land for housing.

CHAPTER 1

INTRODUCTION AND BACKGROUND

1.0 Introduction

Many global and national policy documents challenge that land administration systems need to adopt new strategies to cope with poor land management, sustainable development and economic growth (Molen, 2006). Land policy is part of the national policy on promoting such objectives as economic development, social justice and equity and political stability. Land policies associated with land privatization include security of tenure; land markets (particularly land transactions and access to credit); real property taxation; sustainable management and control of land use, natural resources and the environment; the provision of land for poor ethnic minorities and woman; and measures to prevent land speculation and to manage land disputes (Enemark, 2005).

Other cities elsewhere in European countries and some in Asia have been moving towards a market orientation which has seen much of the previously centralized city council activities being privatized and delivered using a market system with the ability to pay determining who gets which resources and at what price. The main public goods and emergency services however remain the key responsibility of the city councils and cannot be privatized. Land privatization is also a form of land reform. The main goal of land privatization is to improve livelihood opportunities and to enhance access to land (May & Lahiff, 2007). However, land privatization is an unambiguous practice of subdivision/restitution, when state land ownership is transferred to individual citizens with a bundle of rights.

1.1 Background of the Study

Windhoek is the capital city and the seat of the Namibian government. The population of the city is around 300 000. Over the years, the influx of people has increased considerably and has placed a tremendous burden on the resources. With the explosive urbanization pressure, it has become imperative for the city council to develop and deliver land at a faster pace than the capacity allows. The increasing pressure has therefore created a huge gap between services demand and services delivery resulting in poor service delivery in the overall service portfolio of the city of Windhoek. The accelerated influx of migrants into Windhoek since 1991 after independence has caused progressive settlement growth on council-owned land as well as considerable shelter and servicing problems. Since 2001 almost 30 percent of the population living in Windhoek (including nearby Katutura) are in informal, unplanned communities, in sub-standard structures on un-surveyed land without legal titles.

Most informal areas have access to safe water; communal taps are within considerable walking distance but fewer than 20 percent of the households are connected to a waterborne sewerage network. Private and public sector developers (e.g., National Housing Enterprise) provide limited housing available only to the middle and upper-income households. An “in-situ upgrading” initiative honours the natural settlement patterns and densities that have developed. Concepts of communal block tenure and shared communal service facilities are used and welcomed by the communities. Poor institutional arrangements and processes have led to bureaucracy, slow and costly transactions, corruption, land appeal, and increase uncertainty in decision-making level. From the institutional side, land agencies have to deal with enormous amounts of

uncertainties due to unstable and unclear strategies, institutional arrangements, incomplete land data, and procedures, and other uncertain factors such as human and technical resources (Bagdai, 2009).

During the period 1991-1999, Windhoek developed a number of formal low-income housing schemes. However, the serviced plots provided were unaffordable to the vast majority of the poor. During 1991-1994 periods, in response to the influx of poor urban migrants, the city developed three Reception Areas that were intended to be “temporary.” The concept was that people would be resettled in accordance with Windhoek City Council (WCC)’s squatter policy of the time. Surprisingly, this did not happen. The areas attracted further settlers even before the sites had been laid out or could be provided with rudimentary services.

Apart from some flat land in the south of Windhoek, most flat land is now developed and current formal and informal development is also taking place on the fringes of hilly country in the north and northwest of the city. In this area soils are generally rocky with little topsoil cover in the sloping areas, few trees and little shade.

In 1992 the first reception area (Havana, formerly called Big Bend) was established, followed by Okuryangava Extension 6 (locally referred to as Babylon and Kilimanjaro). In 1998 a third Reception area (four blocks in Goreangab) was developed. These areas consisted of tracts of land where earth roads were cut to a rudimentary layout, lifeline water supply was provided and, in some cases, communal toilet facilities were also provided. People settled in shacks of corrugated metal sheeting on plots of 300 square meters, set out in blocks. It proved very difficult to resettle people to these areas

and major land invasions occurred prior to site layout and construction. The City Council was unable to contain growth within the planned boundaries of the reception areas.

Eventually, WCC created an “in-situ upgrading” initiative and decided, along with the target communities in these upgrading areas, to honour the natural settlement patterns and densities that had developed. This would minimize social disruption from resettlement; increase the possibility of providing affordable improvement solutions, and decrease pressure on the Council to simultaneously develop land elsewhere. The concepts of communal block tenure and shared communal service facilities were used and communities welcomed the upgrading initiative and shared ownership on a communal block basis.

Profile of Low-Income Settlement Residents

In 2000, Windhoek's total population was estimated to be 235,000. A 1995 local survey estimated that the population of the city was 182,000 and would double within 10-12 years. According to the survey, the annual population growth rate was 5.4 percent of which 3.9 percent was the net migration gain. Thirty-two percent of the migrants settled in informal areas, at 3.7 persons per household. The household size in the informal areas, in the north and northwest, was low compared with the citywide average of 4.1 persons per household. The average monthly household expenditure in these areas, respectively, was approximately US\$190 and US\$80 compared with the Primary Household Subsistence Level for Windhoek of approximately US\$140. Unemployment was approximately 22 percent among those seeking employment, and female-headed households numbered about 26 percent. The survey also revealed that the housing need in

the Northern and Northwestern Areas was most pressing as about 93 percent and of this low-income population were not able to afford a housing solution costing more than US\$8 per month.

The City's household registration surveys of 1997/1998 provide further information on the profiles of low-income households. A study of three informal groups indicated that almost 50 percent of poor households earned less than N\$500 (US\$80) per month, a further 15 percent approximately less than N\$800 (US\$130) per month and another 20 percent approximately less than N\$1340 (US\$240) per month. The income of 80 percent of the sample households was well below the primary household subsistence level of 1999 of N\$1318 (US\$220) per month.

In 1999, the average cost of a communally serviced plot (ERF) was approximately N\$7,200 (US\$1,200). Based on the above figures and assuming an expenditure of 15 percent of total household income for individual plot acquisition, only about 17 percent of all target (low-income) households could afford to purchase an individual serviced plot of 300 square meters.

Policy Context

National

The National Housing Policy provides the following guidelines concerning standards and principles for low-income development, which are relevant to development of the shelter sector in Windhoek. For squatter resettlement, the policy requires a minimum of a communal toilet within 30 meters, access to communal portable water within 200 meters and a roofed structure of durable materials of not less than 6 square

meters. Plots for low-income housing should not normally be less than 300 square meters. With the consent of the Minister, smaller plots may be permitted where this is justified by the design, implementation or marketing concepts of individual projects. The guideline for minimum ERF sizes recognizes the need for adequate space in order to accommodate extended family structures and play areas for children.

Local

An appropriate, realistic policy context for upgrading in Windhoek now appears to have been established. The Access to Land and Housing Policy of January 2000 is guided by the Istanbul Declaration of 1996 which states that “everyone should have adequate shelter that is healthy, safe, secure, accessible and affordable and that includes basic services, facilities and amenities, and should enjoy freedom from discrimination, in housing and legal security of tenure.” This policy and the Development and Upgrading Strategy focus on three main areas:

- i. Participating and co-operating to recognize, support and enhance community self-reliance, organization and partnerships
- ii. Reaching beneficiaries and securing land title and housing according to affordability and standard
- iii. Affirming favourable access to land and housing on a sustainable basis

As revealed in their names, the policy and the strategy cover both new or “greenfield” residential areas for the poor (sites and services) as well as the upgrading of existing settlements, both formal and informal. Thus the city is taking a holistic approach to the problem of land, housing and services for the urban poor by tackling the problem

on two fronts, as is required in the whole region. Programmes and projects are required to deal with existing deficient settlements (the “backlog”), and to deal with natural population increase and in-migration (the “growth”). The focus is on upgrading of existing settlements, whether they are formal or informal. Currently the city is at the very early stages of implementation of projects formulated in accordance with the new policy and upgrading strategy. At present, upgrading projects are waiting for the relief of human resources constraints within WCC and have yet to commence, but two sites and services projects have been developed.

Institutional Framework

The Local Authorities Act defines the role of local authorities as, inter alia, establishing and financing housing schemes, establishing a housing fund, and providing services. In Windhoek, the overall management of these processes falls under the Council and its Management Committee. The Access to Land and Housing Policy requires that a Housing Committee be established to handle all housing matters. Key stakeholders in the sector are represented on the Committee including NGOs, such as the National Housing Action Group and the Shack Dwellers Federation, as well as WCC departmental staff.

The functions and responsibilities of the Housing Committee, which advises the Management Committee, set the direction in the process of facilitating access to land, services and housing. These roles and responsibilities include consideration of feasibility studies conducted under the upgrading policy and strategy; action plans; housing standards; creating environmental awareness; ways and means of enhancing economic

development; community participation; conflict resolution in communities; and monitoring and evaluation of programs.

The policy recognises that service delivery is intertwined with housing provision and that Municipal Service Departments have a key role to play if affordable low cost services are to be achieved. It also defines the role of self-organized groups, neighbourhood committees, steering committees, NGOs, financial institutions and the private sector. These committees are to act as a channel of communication with Council, involving community leaders in all aspects of land, services and housing delivery. They will monitor progress, assist in addressing conflict situations, facilitate the establishment of community meetings and monitor the allocation of land to the various communities. The committees form the core management group for the implementation of the settlement guidelines and are to be legal entities.

Thus an institutional framework appears to have been put in place to ensure that the concerns and aspirations of all stakeholders involved in housing and upgrading are taken into account during program development and implementation. An appropriately resourced (human and financial) department or directorate within the WCC to drive the process is now the key requirement for moving forward rapidly.

Namibia's towns and cities are responsible for the provision, operation and maintenance of most municipal infrastructure and services. Roads, drainage, water supply, sewerage, electricity distribution, street lighting and solid waste management are all functions that are the responsibility of municipalities. Although this places great onus on the WCC to provide services, the fact that the City is the responsible agency for

almost all basic infrastructure and service provision, rather than a number of other utility organizations, simplifies the planning, design, financing and implementation of initiatives for upgrading poor settlements as well as the development of low cost housing schemes.

The highest pressure is on Windhoek, which has a hilly periphery, but since the WCC owns much of the land, Windhoek is in a better position than many cities to service land and develop schemes for low-income households. However, the WCC is aware that land is a finite resource and thus schemes need to be planned with this in mind. In this regard it is developing innovative schemes that attempt to make more efficient use of land although they do not necessarily accord with national policy. For example, National Housing Policy stipulates a minimum ERF (plot) size of 300 square meters, a prescriptive requirement with, it seems little merit from technical, environmental and health viewpoints although perhaps with some social merit as poor households often house extended families.

Whatever the merits of plot size, prescriptive requirements make provision of affordable solutions more difficult. To overcome this constraint Windhoek has provided 300 square meter serviced plots but has permitted two households to reside on one plot on a leasehold basis (i.e. one household buys and may also accommodate one lessee household). This provides owners with income, and households, unable to obtain a plot of their own, with a rental opportunity.

Principles and Guidelines for Upgrading

Upgrading has, and will continue to have, a major role to play in urban development. The principles for upgrading schemes, as laid down by the WCC include:

- i. Services in all development options, especially lower levels, should be based on reasonable health standards.
- ii. All development levels should be technically appropriate.
- iii. Reasonable social acceptance and understanding of the development options should be ensured.
- iv. Community initiative should be encouraged for gradual improvement of own living conditions.
- v. Such initiatives should be facilitated in an orderly manner and optimize financial and institutional resources.
- vi. Permanency and forms of ownership of land (security of tenure) should be promoted.
- vii. Financial risk for Council and its clients should be minimized in the development and upgrading of serviced land.
- viii. Costing, pricing and administrative systems for land sales and leases of each development level should be standardized and yet flexible.
- ix. Resource use (natural, financial and human resources) should be optimized in the land development process.
- x. All low-income land development should be aimed at financial, social and environmental sustainability.
- xi. The concepts of full cost recovery and “user pays” should be the underlying principles of any low-income land development project or program.

1.2 Statement of the Problem

The major problem that the City of Windhoek is currently facing is a slower pace of land development and servicing that has seen the gap between demand and supply widening uncontrollably. The result of this has been the sprouting of shanty towns all over the city as those who cannot find developed land often resort to squatting. This has in turn resulted to the consequential problem of poor service delivery to all residents which in turn has resulted to deterioration in the living standards, increased health hazards and crime within the city. The council is in a precarious state to develop land for sale. However, the demand for serviced land by far outstrips the delivery of land. In addition, the land development and delivery process is comparatively too long. At times, it can take up to 5 years between planning and actual sale of land. Besides, there are a host of internal as well as external stakeholders in the process.

Further, the City is faced with the problem of lack of resources such as finance as well as personnel, lack of qualified contractors and increasing urbanization. There is an urgent need to shorten the process of land development and service delivery and make it more efficient and faster in a bid to cope with the ever increasing demand. Currently the City of Windhoek is not able to supply in adequate numbers developed and serviced land for urban development leading to inflated land prices, extensive squatting, unhealthy living environments, congested residential areas among a host of other land related quagmires. These among other factor have propagated the research on public sector service delivery, the case of land development servicing and related services within the City of Windhoek.

1.3 Objective of the study

The primary objective of this study is to explore the various collaboration options available for the delivery of adequate, affordable and quality public services between the public and private sector organizations using global best practices to the benefit of Windhoek residents. The outcome of this will be used to recommend to the authorities a working model for improving the quality of services offered to the residents.

1.4 Research Questions

The main research question for this study will be: What are the determinants of an effective and efficient urban land development, servicing and service delivery system for urban setting like Windhoek? Other supporting and more specific research questions will include:

- i. What are the determinants of effective and efficient land development, servicing and services delivery model for the City of Windhoek?
- ii. What are the alternative model(s) of land development and servicing delivery frameworks that are adaptable to the City of Windhoek for land development, servicing and housing provision?
- iii. What is the appropriate mix between public and private institutions involvement that is necessary in land development and servicing for the city of Windhoek?
- iv. What policy adjustments are necessary to achieve effective and efficient land development and servicing delivery in Windhoek?

1.5 Delimitation of the Study

This study will concentrate on issues affecting Windhoek only. Information will however be collected from both regional cities and international cities for reference purposes.

1.6 Significance of the Research

With all of the pressing problems of poverty, homelessness, debt burdens, and trade deficits, policy makers dismiss land market problems as issues of secondary importance to be tackled later. Such a view is short sighted. Over the next decade most cities in the developing world will confront major land market problems – shortages, runaway inflation, and environmental and economic crises resulting from inappropriate land development. These problems will stem from rapid urbanization and sagging urban economic productivity. This topic has been chosen for the following reasons:

- i. Land servicing is an acute problem in Windhoek and thus solutions are urgently needed and thus the choice to explore the possible solutions
- ii. The availability of serviced land will help many Namibians living in shanty towns and thus compounding the importance to find solutions to effective land servicing.
- iii. Economic benefits will accrue in the form of more investment if there is sufficiently available developed land infrastructure.
- iv. Effective land servicing will improve the living conditions for most Windhoek dwellers thus the choice to explore this topic.

Beyond the “atypical” cases of Hong Kong and Singapore, other nations are starting to effectively manage their land markets to achieve social, economic and

environmental objectives. Botswana, Barbados, Honduras, and Nepal provide exemplary models of well-conceived and targeted government interventions to increase urban land supply to support population and economic development. Their approaches rely on limited government intervention and active participation of private land developers. In the case of San Pedro Sula, Honduras, the city developed new land-use planning and development control policies that are based on careful assessment of urban land demand and supply patterns (PADCO, 1989). In Botswana, the government has altered its control over land supply and delivery to increase the responsiveness of the market to urban growth. This topic has been chosen to carefully evaluate the case of Windhoek and recommend the necessary step to ensure that Windhoek becomes another success story in future.

Obviously, what works in one country may not work in another and, as always, local context is a critical point of departure for redesigning the focus and structure of national and local land-use policies. Of fundamental importance is the structure of governmental administrative power, that is, the degree to which land-use policy is set and managed by central government. Since many developing countries built their governments on principals of centralized forms of administration, the institutions of land management and policy reflect a high degree of centralized control over urban land development, land titling, and registration and land-use controls, thus the importance of carrying a thorough research for each area such as Windhoek in this case.

1.7 Organisation of the Study

This chapter gave a brief overview and background of the area of the study in the context of the City of Windhoek. The remainder of this study is as follows: Chapter 2 discusses the existing theoretical and empirical literature on the subject of the study. Chapter 3 documents the methodology and empirical motivation as well as the research instruments employed, while Chapter 4 presents the results and their interpretation. Chapter 5 summarises the findings of the study, policy implications and recommendations for effective land management.

CHAPTER 2

LITREATURE REVIEW

2.1Introduction

According to the United Nations guide to municipal finance, the major challenge for local governments is to keep cities economically viable by delivering high quality services while keeping taxes sufficiently low not to discourage businesses to re-locate in their jurisdiction (UN-Habitat, 2009). This problem is further complicated by rapid urbanization as a sizable population and proportion of economic activities in most countries is now generated in cities. Over the next 40 years urban population is expected to triple in Africa (UH-Habitat, 2009).

Ordinarily Local governments are required to provide transportation and communications networks, water and sewers, fire and police protection, parks, recreational facilities, cultural institutions, social services, social housing, and public health etc. A United Nations Housing and Settlement research on municipal finance in 2009 found that the revenues that municipalities generate are less than the budget that is required to provide adequate services to cope with the pressure of urbanization. This has resulted in inadequate infrastructure, inadequate housing and poor services delivery which in turn have resulted in urban sprawl in developing countries. The same trend is noticeably visible in Windhoek with Shacks sprawling all over the western suburbs of the city.

2.2 Background and Overview of Urban Services delivery in Namibia

Provision of public goods and services is necessary for economic development. Most African governments, especially immediately after independence interpreted the demand for urban housing as a welfare question and therefore a legitimate right of a newly liberated people than as part of a crucial national sector. This perception has resulted in severe policy distortions; entangling governments in ways that most governments of developing countries have yet to find a way out (Malpezi & Sadu, 1996). There is now widespread recognition that most operational urban development models, fashioned as far back as 1960s for policy prescription, are strictly limited in their abilities to generate meaningful predictions in situations of rapid urban growth (Wegener, 1994).

Housing problems, policy distortions and failures in models adopted by various governments and municipalities are evident across the African continent for example, Tanzania, Kenya, Uganda, Zimbabwe and Namibia. According to the Namibian Reserve Bank Governor, to meet the housing needs of the population; the government ratified pertinent international legal instruments; introduced a number of national policies and has been allocating financial resources to facilitate access to housing among low income and ultra-low income households (Bank of Namibia, 2011). In the same paper, the challenge on the Namibian housing market is that houses have become unaffordable, in Windhoek the issue of affordability is exacerbated by a continuous escalation of prices due to a number of factors. Among others, demand has outstripped supply of houses, the shortage of serviced land, and the increase in the cost of building materials and speculation in the housing market.

According to the 13th Symposium of the Bank of Namibia 2011, housing has been one of the main objectives of the past three National Development Plans (NDPs); the delivery rates have been below expectations, with a total current backlog of 300,000 houses. The central government has partnered with private, local and regional community based organisations and non-governmental organisations in an effort to improve housing delivery. Despite these efforts the housing challenge continues to persist. The same paper states that one of the reasons for the shortage of housing in Windhoek is that access to serviced land within municipal areas is a problem so much that serviced land for auction arguably benefits only the high income earners. In addition, the cost involved in servicing land is prohibitively high.

The Namibian Local Authorities Act (1992) defines the role of local authorities as, inter alia, establishing and financing housing schemes, establishing a housing fund, and providing services to the city residence. In Windhoek, the overall management of these processes falls under the Municipal Council and its Management Committee. The Access to Land and Housing Policy requires that a Housing Committee be established to handle all housing matters. Key stakeholders in the sector are represented on the Committee including NGOs, such as the National Housing Action Group and the Shack Dwellers Federation, as well as WCC departmental staff.

The functions and responsibilities of the Housing Committee, which advises the Management Committee, set the direction in the process of facilitating access to land, services and housing. These roles and responsibilities include consideration of feasibility studies conducted under the upgrading policy and strategy; action plans; housing standards; creating environmental awareness; ways and means of enhancing economic

development; community participation; conflict resolution in communities; and monitoring and evaluation of programmes.

The policy also recognizes that service delivery is often intertwined with housing provision and that Municipal Service Departments have a key role to play if affordable low cost services are to be achieved. It also defines and welcomes the role of self-organized groups, neighbourhood committees, steering committees, NGOs, financial institutions and the private sector to participate in the delivery of affordable housing. These committees are a channel of communication with Council, involving community leaders in all aspects of land, services and housing delivery. They monitor progress, assist in addressing conflict situations, facilitate the establishment of community meetings and monitor the allocation of land to the various communities. The committees form the core management group for the implementation of the settlement guidelines and legal entities.

2.3 Namibian Land Tenure System

Currently, various private individuals, private organizations and private surveying companies have carried out a number of flexible land tenure surveys on Flexible Land Tenure System (FLTS) and are very keen in administering the flexible land tenure system on the local authorities who are very much responsible for land administration. The majority of municipalities, town councils and village councils in Namibia are managing FLTS land with pen and paper, while the country's objectives – the Namibia's Vision 2030 is encouraging the realizing of living in a technology nation.

Currently, most of local authorities are managing the freehold tenure land using AutoCAD and GIS related mapping technology packages ignoring the FLTS land, while

the poor also need spatial answers related to their land. Out of the 13 major towns in Namibia, Windhoek, Otjiwarongo, Oshakati, Kunene, Ongwendiva and currently Rundu and Katima Mulilo have already done some major upgrading of informal settlement according to FLTS standard.

The need to recognise the FLTS both as land tenure and as potential geographical features into GIS world is important in combating poverty (in providing secure land to the poor, better home for everyone, plan efficiently) and realising the nation's Vision 2030 of living in a technological nation. Poor management and implementation in overseeing the process of FLTS has been legalised by the responsible government offices which also contribute highly to FLTS not been recognised by local authorities.

FLTS has been researched and addressed in many papers by few experts and in publications. In order to address specifically the GIS experts in various organisations, this project focuses on the underlying GIS technology in managing the FLTS. For readers who requires full picture of the present land administration system in Namibia, tenure rights, present socio-economic situation, etc. please see the listing below for additional information.

2.3.1 Flexible Land Tenure System (FLTS) and GIS Technology

According to Christensen (2004), roughly half of the total land area in Namibia is held under registerable freehold title, while the remainder communal land subsumes a number of different land tenure systems ranging from individual rights to residential and arable land to communal rights and grazing.

There are two types of tenure titles in addition to freehold which include Starter title and Landhold title. Starter title is a statutory form of tenure registered in respect of a block of land, whilst, Landhold title is a statutory form of tenure with all of the most important aspects of freehold ownership, but without the complications of full ownership.

With high population growth, there is a high need for serviced land both for residential and business use in urban areas. The planning of serviced land can be analysed and managed efficiently by using GIS technology. Considering the rapid growth of urban informal settlements, the cost of traditional mapping processes, and the information requirements for planning and management of informal settlements, GIS is the only valuable tool for handling spatial data for the effective upgrading and formalization of informal settlements to FLTS standard.

Academic institutions like the Polytechnic of Namibia have done a lot in reaching the national objectives of poverty reduction concerning land issues, a number of qualified land measurers, land use planner, land registration officer, and so forth have been graduating from this institution and meet the standard of implementing the FLTS in various regions, including managing the land using GIS, GPS technology, and so forth.

GIS software techniques are increasingly more user- friendly and comprehensive. The reason for the struggles in the implementation phase can be ignorance of spatial data. In addition, there is a lack of availability of the needed budgets and consistent data. Involving GIS technology in managing the FLTS data can help in uplifting the economy of the low-income people, because it can answer geographical questions quicker and reliably. Perhaps the realization of the Namibia's Land Information Systems (NLIS)

proposed by Swed-Survey AB is a good solution for land administration, which will also realize the nation's Vision 2030.

2.3.2 FLTS Land Administration's and GIS Technology

Steudler et al. (2004) defines "Land Administration" as the process of recording and disseminating up-to-date information about ownership, value and use of land and its associated resources. Therefore is the current land administration of FLTS land answering the above statement? Does it meet the national objective either? Because the potential contribution of an efficient land administration system to national development objectives include: alleviating poverty and enhancing economic growth, improving the security of land tenure and efficiency of land markets through development of an efficient system of land titling and administration, based on clear and consistent policies and laws and supported by an appropriate institutional structure.

There is a need for a Geographical Information Systems (GIS) in any land administration process to answer spatial questions more efficiently and quickly. The use of pen and paper alone by any means is simply not enough to answer the question of spatial data. There is a need for an efficient and user friendly technology, such as GIS technology in handling geographical features.

2.3.3 Current FLTS Land Administration Status

The current land administration in Namibia by local authorities is not complete because it does not answer the land administration objective which states that 'land administration is a process of recording and disseminating up-to-date information about ownership, value and use of land and its associated resources (Steudler et al. 2004).

The FLTS information is not recorded and disseminated on the base of its ownership, value, use and its associated resources. Most flexible land tenure in various local authorities is still being ignored as spatial parcel but block even as it is the case with the Surveyor General's Office (SGO).

Other reason associated with the poor land administration issues in most local authorities is that they are purely managing land with inappropriate methods, such as pen and paper. Whilst, some local authorities are simply ignoring to accept flexible land tenure records in their Land Information Systems (LIS) or has no powerful LIS to distinguish the freehold and FLTS land tenure.

2.3.4 General Land Administration Developments in Namibia

Although there is a topographical database for the entire Namibia at the Directorate of Survey and Mapping (DSM) and the national register at the Deeds Office (DO). There are a number of challenges with regard to spatial data management in Namibia, there is a lack of agreement concerning standardization, and redundant data production adds to the complexity of spatial data management problems.

As there is no complete multi-purpose national LIS for the entire Namibia, there is basically progress in introducing the Namibian Land Information System (NLIS). The Swedesurvey AB pre - study presentation took place on the 28th of April 2006 to introduce the NLIS after consulted by the SGO of the Ministry of Lands and Resettlement. The DSM is the key to motivating the need for LIS in Namibia because of their massive spatial data currently being handled manually. It is important to review and outline the spatial data technical integration of stakeholders (Figure 1) and the

functionality exchange between stakeholders (Figure 1) in Namibia. The NLIS aim to manage all the freehold land, individual rights to residential and arable land to communal rights to grazing and FLTS land, and so forth in terms of data exchange and the current development of cadastre.

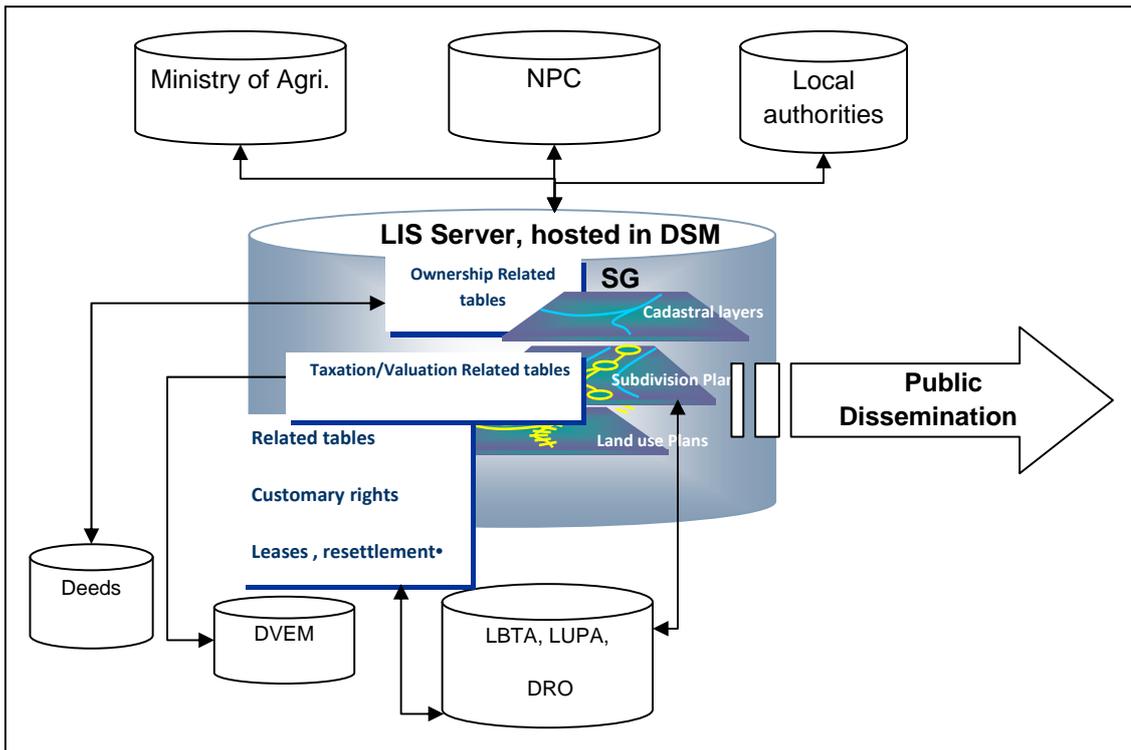


Figure 1: Spatial data technical integration of stakeholders

It was recommended that the DSM should be designated as the hub for establishment of the LIS, further agreements of formalizing the structure of Unified Parcel Identifier (UPI), data sharing between directorates and other agencies (figure 1) should be finalized and real property register law should be established. At this presentation, the Geomatics Division represented the City of Windhoek (CoW). Figure 2 below shows all the types of data to be integrated and managed.

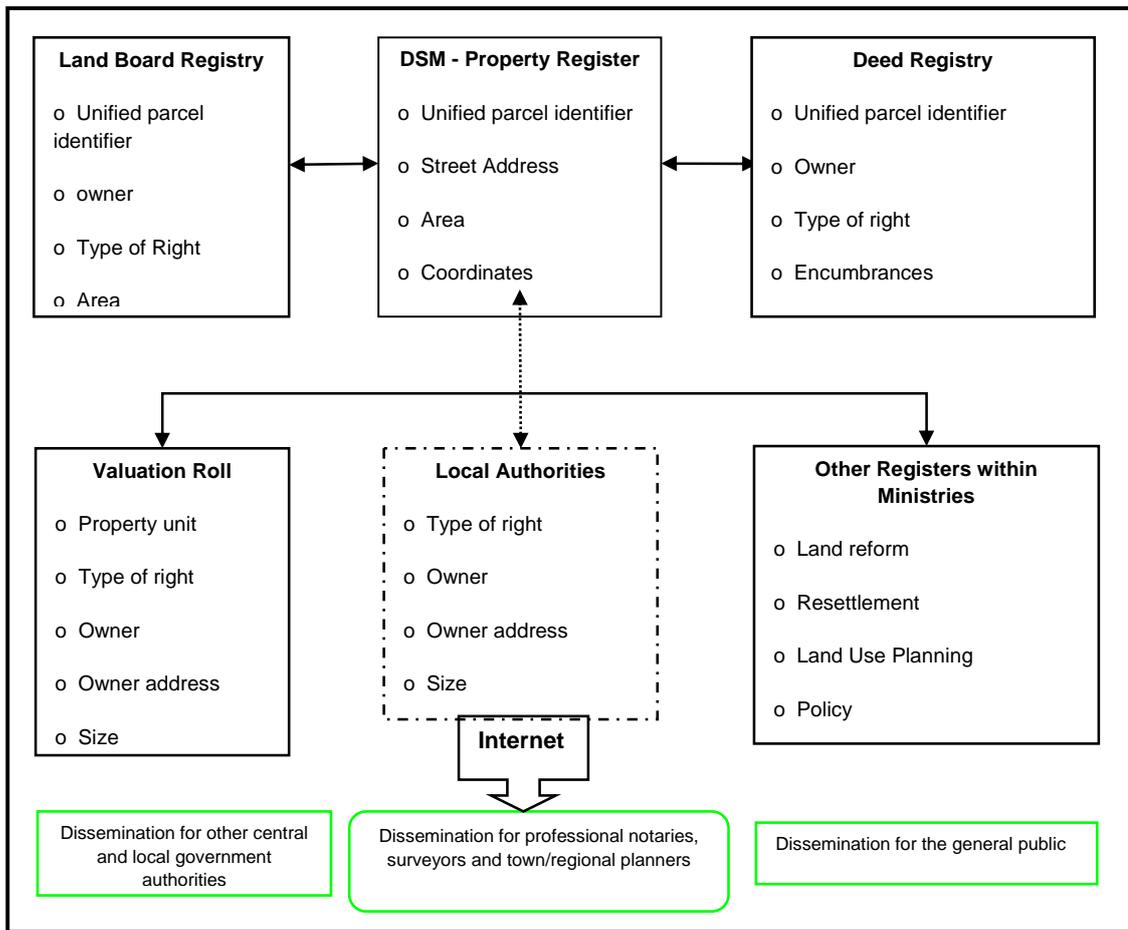


Figure 2: Functional Exchange between Stakeholders

Spatial data management challenges in a multi-institutional context are mainly caused by lack of policies and infrastructure for data exchange and sharing, although the demand for this was identified and even acknowledged by some institutions, it caused inter-organizational decision-making problems (Merson, 2004). The problem of unclear organizational mandates makes it difficult to set up a cooperation framework in which the responsibilities are being clearly defined based on the functional characteristics of an organization.

The lack of organized co-operation between large group of spatial data producers and users, and lack of requirements analysis for facilitation of information detection, sharing, exchange, creates a situation in which avoidance of data redundancy is impossible. Merson (2004) states this very clearly 'there are no policies on digital data copyrights, no policies for digital exchange and data sharing'.

With regards to political issue, the FLTS project would be secured, due to the growing interest of high level ministry officials in the land administration related to poverty alleviation and informal settlement upgrading.

The use of GIS technology in managing FLTS in the entire Namibia has been under consideration since 90s. The Polytechnic of Namibia has had GIS courses since the mid-90s in the context and for the purpose of local land management. Therefore there is no need for struggle in workforce matters; it only requires realization of the set objectives by responsible organization and ministerial offices in Namibia.

In general, local authorities with the responsibility of land administration in Namibia seem not to know that simple tools for performing the tasks will make the organization more efficient, effective and cost benefits involved in the use of these tools. GIS tools are one of those tools.

2.4 Overview of the Urban Housing Infrastructure and Land Servicing Models

An early Definition of land development suggest that land development is a process through which new urban areas, for instance residential neighbourhoods, commercial districts and new physical infrastructure, for example electricity lines, roads and sewage systems, are established by implementing land use and development plans

(Adams, 1971). Also this process can be defined as the management of change in existing rural or urban land use by regulatory mechanisms such as planning or land use permissions. It is a multidisciplinary mechanism and based on the nature and scope of the development, the process includes activities like land acquisition, subdivision and planning consent, project design, construction works, and finally distribution of development incentives and costs. It involves actors such as, land owners, developers and speculators, architects, marketing agents, public organisations, building contractors, third parties such as NGOs, and financial institutions. Land development is a process and can be depicted in a diagram as shown below.

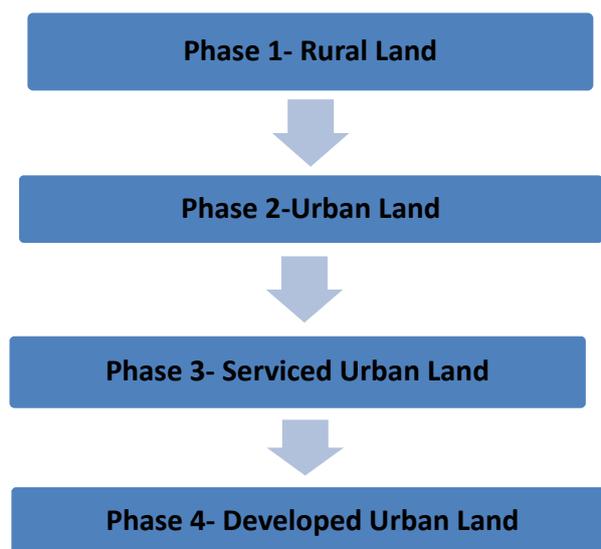


Fig 3: Land Development Process

Source: *Urban Land Development Model* (Chinzorig Batbileng, 2010)

Different authors have come up with different approaches of modelling the land development and service delivery processes. Below are some of the common approaches.

i. Sequential or Descriptive Models

Depicts the development process as a chronological sequence of stages, at each stage certain events occur. The processes include, the identification of land for upgrade, approving of plans for development, conversion of rural land to urban land, and then into serviced urban land and finally the development of urban land into buildings and infrastructure.

ii. Event-Sequence models

It focuses on the management stages of the development processes. These models derive primarily from an estate management preoccupation where managing the development process is the key focus.

iii. Behavioural or decision making models

Emphasizes the roles of different actors in the process such as the local authorities, development organisations, estate agents, etc and the importance of the decisions they make in ensuring its smooth operation. Although they often retain a sequential format, events are generally presented as secondary to decisions.

iv. Agency models

It focuses on actors in the development process and their relationships. These have been developed primarily by academics seeking to describe the development process from a purely behavioural or institutional point of view.

v. **Production based models**

Portrays the development process as a specialised form of a productive economic activity and tend to view it from the perspective of the economy as a whole-that is, they tend to be macro-economic interventions in flavour and nature.

vi. **Equilibrium models**

Assumes that development activity is structured by economic signals about effective demand, as reflected in rents, yields, etc and supply represented by among others the cost of capital, bank rate and the general economic output. These derive directly from the neo-classical tradition in economics.

vii. **Structures of provisional models**

Contends that different types of developments are characterized by different institutional, financial and legislative frameworks and as such the search for a generally applicable model is futile. Instead, each type of development is seen to have its own distinctive 'structure of provision', whose structure feature may be built into a separate model. This implies eventually there will not be just one model of the development process, but a comprehensive set of specific models for specific contexts. Structural models focus on the forces which organize and influence the relationships of the development process and which drive its dynamics. Essentially all models represent the same phenomena, but approach the issue of urban land development from different angles based on their objectives and contexts. Analysis of other secondary data gives a general model of urban land development which can be presented as shown in the figure below.

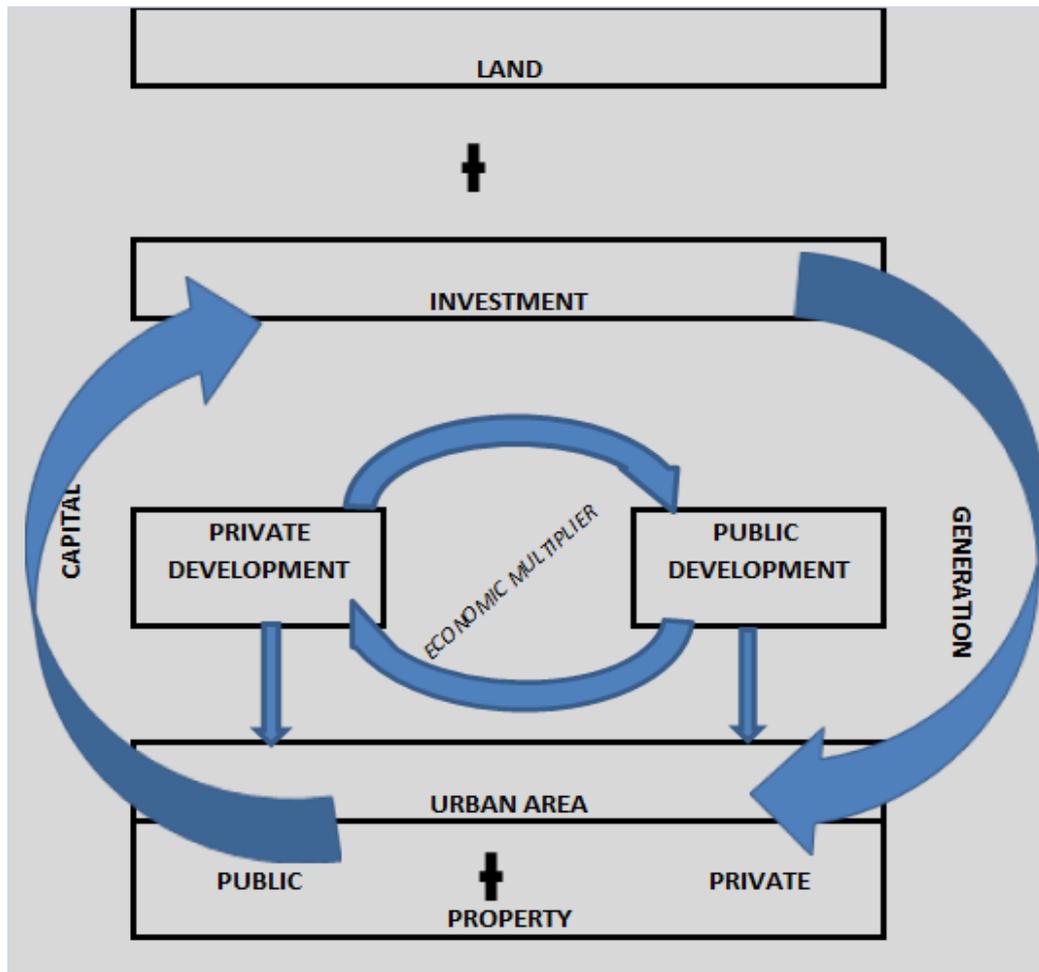


Figure 4: General Model of Land Development

Source: Chinzorig Batbileng 2010

The model suggests that the urban area, in all its diversity such as residential, industrial, commercial etc., is the result of the development of land from its bare agricultural form when the public and private sector invest into it. The public and private players must work together for the model to work and result in the desired level of urban development and infrastructure support.

2.5 Service Delivery Models

According to UNDP (1999), service delivery is a set of institutional arrangements and interactions adopted by the government to provide public goods and services to its citizens. Therefore, it is the choice and mix of specific institutional arrangements that critically influence the performance of public services delivery. The same paper highlights four basic broad models of public service delivery arrangements that governments everywhere have adopted.

2.5.1 Direct Service Delivery Model

This is the predominant model characterised by the central government bringing out a legislation, enforces it, hires staff, invests, produces and distributes services, either directly operating from the headquarters or through de-concentrated line agencies or local authorities, the government assumes full responsibility, and is accountable not only for providing but also for delivering quality services.

2.5.2 Privatization Service Delivery Model

In this model, the government transfers the delivery of public services to private companies. In this case it assumes no responsibility except for monitoring the company's compliance with established legal codes. In many countries transportation and communication services are privatized and delivered mostly in this mode. The basic rationale of privatization is to gain advantage of locative efficiency of the market mechanism and at the same time meet resources gaps through the mobilisation of private sector investment into the public service sector.

2.5.3 Decentralization Service Delivery Model

Decentralization of service delivery functions to local government bodies is the most popular model in most countries. Decentralization is based on subsidiary principles of governance; a rule where provision, production and delivery of services are to be devolved to the lowest governmental tier i.e., the local bodies, subject to economies of scale and capacity. By virtue of being closest to the citizens, local bodies are better positioned to match supply of a given service to citizens' demands thereby transforming citizens from service recipients to clients, and ensuring citizens greater accountability for service quality.

2.5.4 Alternative Service Delivery Models

In the arena of public service delivery, 'the Alternative Service Delivery Model' is a relatively recent phenomenon. It simulates a marriage between the government and private sector with different contractual arrangements often referred to as public-private partnerships. However, the ultimate ownership of such project is generally vested within the government, and it retains the power to provide public services, whereas the private parties make the actual delivery.

2.5.5.1 Public-Private Partnerships

According to the UN guide to municipal finance (2009), in many countries, municipalities have turned to the private sector to deliver and fund public sector services through explicit public-private partnerships. The rationale for private sector involvement in the delivery of local public services is to improve the efficiency and effectiveness of services delivery. Municipalities as part of the decentralised services delivery also turn to

the private sector, in some cases, because municipalities are not permitted to borrow on the capital market or are not willing to borrow. An enhanced role for the private sector has been most evident in areas such as transportation, water supply, and solid waste management e.tc.

Public-Private Partnerships (also known as P3s) are partnerships between a government body and a private sector party whereby the private sector provides infrastructure or services that have traditionally been delivered by the public sector. P3s are widely used in the U.S. and Europe, prompted by an interest in improving the efficiency and effectiveness of local public service delivery.

P3s can take many different forms, as shown below: worth noting is that none of these cases involves full privatization; the government body retains ownership of the assets and sets the policies and level of service delivery.

- **Operate**

The private sector operates the facility for a fee. But the public sector retains responsibility for capital costs.

- **Lease/Purchase and Operate**

The private firm leases/purchases the facility from the public sector, operates the facility, and charges user fees. This is commonly used in the United States where certain amusement facilities such as children's parks are leased to private companies.

- **Lease/Purchase, Build and Operate**

This arrangement is similar to lease/purchase and operate except that the private sector firm would be required to build or develop a new facility, or enlarge or renovate an existing facility and then operate it for a number of years.

- **Build**

This is a turnkey partnership in which the private sector is paid a fixed fee to build a facility according to government specifications and turns the facility over to the public sector when it is completed.

- **BOT (Build, Operate, and Transfer)**

The private sector develops and builds the required infrastructure, operates the facility for some specified period of time, and then transfers it back to the government.

- **Build and Operate**

The private sector builds and operates the facility and is responsible for capital financing. The operation is regulated and controlled by the public sector.

- **Build and Transfer**

The private sector builds the infrastructure and then transfers ownership to the public sector

One of the main advantages of partnerships is that, by relieving municipalities of the financial responsibility for up-front capital costs, they enable infrastructure to be built at times when government funding is constrained (Tassonyi, 1997). Since many

municipalities do not like to borrow or are unable to borrow, the P3s is one way to get facilities built without the municipality incurring debt. Even where local governments can borrow, the private sector often has access to a wider range of borrowing instruments. The operation of facilities and programmes by private operators also reduces municipal operating expenditures and may enable additional sources of revenue to be collected. Ancillary uses such as retail can be accommodated within facilities to provide for another source of revenue. Finally, the public sector can draw on private sector experience.

There are, nevertheless, potential risks associated with public-private partnerships (Tassonyi, 1997). For the private sector, there are risks that the regulatory framework could change and cause delays in the project. For the public sector, there is the risk that the nature of the public services provided will not be what the public wants. Therefore the success of a partnership depends on how the contractual arrangements are structured and how the risks are shared.

2.5.5.2 Private Finance Initiatives and Local Improvement Finance Trusts

Apart from public-private partnerships, other trends such as the use of Local Improvement Finance Trusts (LIFT) have also been gathering momentum mainly in Europe, with the United Kingdom at the forefront. Public Finance Initiatives (PFI) enables public sector organisations to spread the cost of infrastructure investment over the lifetime of the asset. PFI offers improved likelihood of the project being on time, to budget and meet the original specifications. However it is unsuitable and a high cost option in certain situations owing to the cost of procurement, risk transfer and private finance.

2.6 Other Trends in Municipal Finance

According to the UN guide to municipal finance, an important trend that has emerged in municipal finance is fiscal decentralization which has meant the transfer of financial responsibility from central governments to local governments forcing local governments to deliver and fund an increasing number of services. Although many industrialized countries have a long history of decentralization, it is much newer in less developed countries. Since the 1980s, as many as 75 countries have implemented decentralization policies as a means of ensuring more efficient public service delivery and addressing poverty issues (Ingram & Hong, 2007).

In many countries, decentralization has meant that national and provincial/state governments have downloaded responsibilities onto local governments. In some cases, the downloading is part of an overall fiscal decentralization whereby the central or provincial/state government passes budgetary authority to local governments to make taxing and spending decisions. The intention is to provide services in a more efficient and effective manner but often the taxing authority is not part of the decentralization process. In other cases, devolution has been by the way for senior levels of government to shift their debt burden onto municipalities by reducing their transfers and directing responsibilities downward (Ebel & Vaillancourt, 2001).

The downloading of expenditure responsibilities to local governments without adequate revenue sources (sometimes referred to as “unfunded mandates”) compromises the ability of local governments to provide services and puts pressure on municipal finances. Regardless of the reasons for decentralization or how much is decentralized to local governments, the revenues under their direct control rarely match their expenditures

(Bird, 2001). The exceptions are a few countries in which local governments have few expenditure responsibilities or in a few countries (such as the Nordic countries) where local governments have substantial access to large and elastic tax bases such as the income tax (Bird & Vaillancourt, 1998).

Almost all countries around the world rely, at least to some extent, on property taxes. Recently, many developing and transition countries have become more interested in land and property taxes (Bird & Slack, 2007). China, for example, has been considering the role of land and property taxation in its rapidly growing urban areas (Bird, 2005).

Property tax is regarded as an important tool for raising revenue at the local level. The tax is also often used to shape urban development patterns and to foster rural land reform. Some countries, for example, are turning to land value capture taxes to pay for infrastructure (such as tax increment financing in U.S. jurisdictions and valorization contributions in Latin American countries) and capture revenues from increased land values arising from government actions that change land use patterns (for example, plusvalia or land value increment taxes in Colombia). Land and property taxes thus have a role in providing revenues as well as affecting land use (Slack, 2002).

2.7 The need For New Models

A closer analysis of existing models has revealed several limitations; some of these limitations are listed below.

2.7.1 The Problem of Uncertainty

Conventional partnerships with private organisations will work if there is a relative degree of certainty. Where there are serious and irresolvable uncertainties over the required infrastructure and services or the cost of meeting those requirements which may result from; latent defects, policy changes, demand risk, changes in needs and preferences or rapid changes in technology, then conventional private-public partnerships and PFI fail.

Applying conventional models in the above mentioned circumstances normally results in the private partner requiring a huge premium to compensate for the uncertainty; the public sector needs to change its specifications leading to extra costs; the public sector may remain stuck with a contract that fails to meet public needs or in extreme circumstances the contract has to be terminated at considerable public expense.

2.7.2 New Infrastructure Challenges

There is a significant need to provide, upgrade and refurbish existing infrastructure. Refurbishment and upgrade projects are less suitable for PFI because they often involve a risk of latent defects. In some areas the infrastructure requirements are subject to significant technological uncertainties. All this makes conventional partnerships limited in fully covering the gaps in public service delivery.

2.7.3 Changing Policy Landscape

While the limitations of existing models are becoming more apparent, changes in policies and the financial framework are also putting pressure on their use. Infrastructures such as hospitals need to be able to adapt their infrastructure and services at a relatively

short time in order to meet changing public needs and demand. In case of PFI, any future changes to the infrastructure will have to be negotiated with the private sector contractor. Given the strong position of the private contractor this could be difficult and costly.

2.7.4 Challenging Credit Market

Credit markets in the USA, Europe and consequentially Africa are experiencing disruptions resulting from concerns about the value of certain securitised debt instruments and uncertainty about which financial institutions may have exposure to debt instruments whose value has been materially impaired. This has led to increased credit margins and a decrease in lending capacity. These extra costs must be considered when evaluating infrastructure delivery models.

2.8 Emerging Models

Because of the limitations that existing models have continued to show over the years, new models are emerging to bridge the gaps.

2.8.1 De-risked Private Financial Initiatives

One model that is emerging is to reduce the risk to the contractors by underwriting some of the financial risk during the operational phase, this is called de-risking PFIs. In this case the contractor adds most value in the construction phase so the risk remains transferred.

2.8.2 Local Asset Backed Vehicles

A local Asset Backed Vehicle is a PPP model that enables the public sector to exploit latent value within its asset base to finance and deliver land and property projects.

It is in essence a corporate venture between the public sector bodies and the private sector. The public sector injects land and property assets while the private sector invests cash to the deemed value of those assets.

2.8.3 Other Emerging Models

Other models such as the use of a project integrator, which involve the inclusion of a private sector partner who has responsibility for the project, The use of competitive partnerships which involve the appointment of several LIFTs at the same time and incremental partnerships have emerged in recent years in a quest to come up with a portfolio of models that enables unlimited public service delivery in all circumstances. All these models have been applied in the United Kingdom and the United states. Their application in Africa remains limited.

2.9 Conclusion and the Conceptual Framework

2.9.1 Observations from the Literature

Given existing urban management policies and practices, it appears that the city of Windhoek is ill-prepared to meet the explosive demand for shelter and infrastructure. The current and projected high population growth rates, both rural and urban, will aggravate the problem. In the short run, perhaps containing or reducing the dimension might be a feasible proposition. For long-term, long-lasting solutions, a critical reappraisal of one's own experience, with reference to similar others, is a must. The salient lessons of experience drawn from the review of literature are summarized in the following.

The Need for Strategic and Inter-Sectorial Policy and Analytical Orientation

Urbanization problems in general, informal development in particular, cannot be analysed and solved as if they were not a structural part of a larger, more comprehensive systemic problem. Problems from other sectors of the economy spill over and affect, positively or negatively, the urbanization process and vice versa. For instance, the performance of the agricultural sector/rural economy may have a direct impact on the magnitude of urbanization problems. Rural to urban migration in Namibia is driven by desperate peasants whose subsistence in the rural economy is getting increasingly insecure for various reasons whose detail will not be discussed in this research. Addressing the problem of food production, environmental degradation/desertification and in general that of rural development, would hence contribute to solve urban housing problems by positively influencing the push and pull factors of migration.

There is no Single Model for Solving Problems of Service Delivery

African urban administrators'/managers' faith on the relevance of received models of urbanization of both pre- and post-colonial origin seems to have been little affected by the challenge of repeated failures. By contrast, many other developing nations seem to have embarked on finding their own individual solutions, though that by no means excluded extensive borrowing and adoption.

The Korean urban managers borrowed the land pooling concept from Germany and Japan and guided development of peripheral agricultural land through their land consolidation programmes in cooperation with the land owners while at the same time ensuring a sort of public participation and cost recovery. They also enforced a strict green

belt zone around Seoul, the capital. On the whole, Korean urban management, though considered cumbersome, is nevertheless not inefficient.

Thailand, by contrast, exhibits a less bureaucratized land development process. Thailand has implemented a market enabling strategy that encourages the emergence of land developers, builders and contractors of varying scale catering to the different segments of the housing demand and supply, including low-income ones. They attempted public housing at earlier periods, but retreated in time once they realized the limited effectiveness of the approach. Malaysia's approach to urban land development has been characterized by stringent legal and regulatory complexity. Nevertheless, they have been able to more or less guide urban development. In Pakistan various city authorities (for example, the Karachi and Hyderabad Development Authorities) have embarked on incremental housing schemes, in essence reduced versions of the sites and services programs, in which minimal skeletal services (only water, trunk road and basic subdivision) are provided.

There is no waiting period nor is there lengthy paper work for the low-income residents to acquire the plots. Houses are constructed on a self-help basis; other amenities (such as electricity and indoor plumbing) could be added provided they are financed through deposits by community groups (Siddiqui & Azhar, 1996). An interesting feature of this approach is that it was made not attractive to land speculators.

Sri Lanka started its so-called Million Housing Program in which the main motto was minimal intervention and maximum support by the state (UNCHS, 1996). In this program the government shifted its role from provider of housing to enabler, in which the

state obliges to ensure tenure security, provide basic infrastructure and small housing loans. The above literature shows that each country had its own initial set of policy failures, but was able to timely and flexibly takes corrective actions. One example is the early retreat of governments from direct supply of housing to low-income households and from viewing housing as a welfare question to acknowledging it as a very crucial economic sector and reorient policies on enabling strategies. To this end, they encouraged the emergence and consolidation of indigenous financial institutions, mortgage banks, real estate developers and contractors. Obviously, there is much reservation and critique about this process, from the perspective of equity of access and opportunities.

The Need to Reform Existing Urban/Land Management Systems

An effective reform will require concomitant changes in several components of the system. From the discussions in the preceding sections it must be evident that the role of the government should be to enable and facilitate, not to substitute individual households' efforts to provide their own housing (Jensen, 1996).

Reforming the urban land management system also implies reorganizing and reorienting the urban land management bureaucracy (Davey et al., 1996). Streamlining bureaucracies that duplicate activities, making the bureaucracy less corrupt (some urban managers seem to have transformed themselves into land sub-dividers) but more responsible and accountable, this will result in cost reduction and efficiency.

Financial and administrative decentralization to municipalities and local councils, coupled with enforcement of strict accountability and transparency, must be an important component of urban management reform (Dillinger, 1994). Many Third World cities

have progressively effected financial decentralization. For instance, Chile increased municipal spending as a percentage of total public expenditure from 4.7% in 1970 to 12.7% in 1992.

2.9.2 Focus of this Study

This study will focus on the new models that are emerging for the delivery of specific infrastructure. The literature has shown that for each type of infrastructure there is a specific model that is suitable. Thus the main focus will be to create a basket of models that the city of Windhoek can use to deliver specific infrastructure. The major models that will be explored in detail are; Private Finance Initiatives, Local Asset Backed Vehicles, Competitive partnerships, Use of Integrators and Alliances.

2.9.3 Criteria for Choosing Appropriate Model

This project will make use of a decision tree to choose an appropriate model of delivery for specific infrastructure that the city of Windhoek delivers. The following diagram shows an example of how the decision tree will be applied in this research.

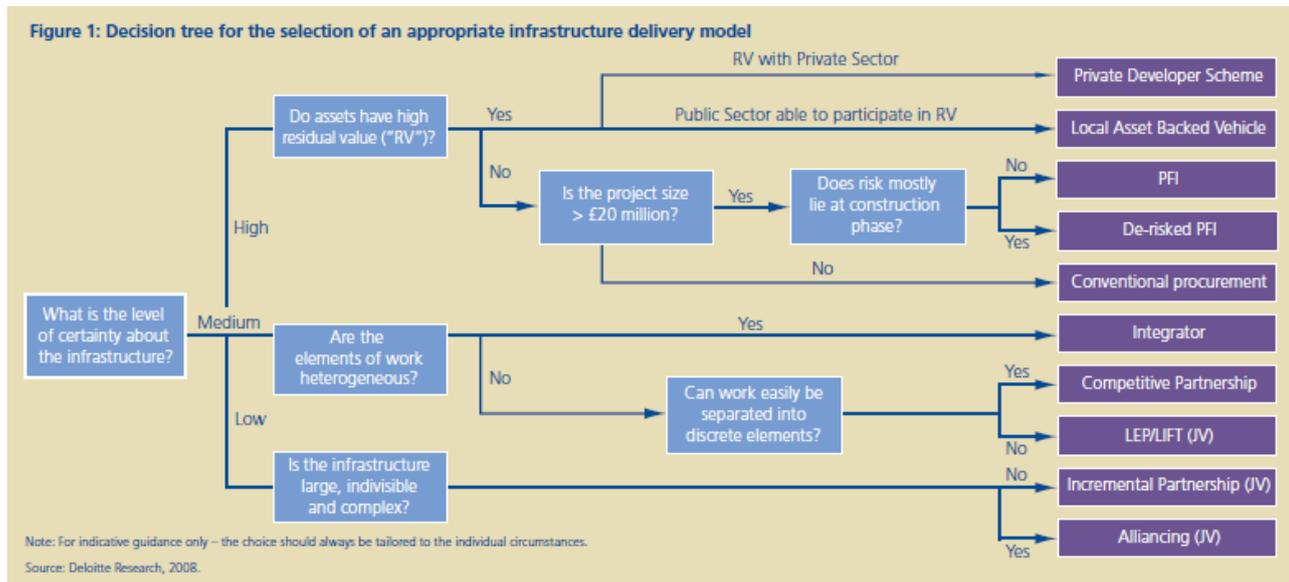


Figure 5: Decision tree for selection of models

Source: *Deloitte and Touch research 2008*

Various infrastructure provided by the city of Windhoek will be explored and an appropriate model for delivery will be selected using the decision tree as indicated above.

The next chapter details the methodology for this research.

CHAPTER 3

RESEARCH METHODOLOGY

3.0 Introduction

The literature review presented in the previous chapter indicated that different models adopted by municipalities have a number of limitations. New models are emerging to bridge the gaps that old conventional models left. At the same time a failure to provide adequate infrastructure may be because the municipality has chosen the wrong models for providing specific infrastructure. Municipalities therefore either need to choose the correct model to deliver specific infrastructure or develop new alternative and innovative models where existing models fail to enable them to deliver adequate infrastructure at an acceptable cost. Further research is therefore necessary to determine whether an alternative model or adopting different existing conventional models will provide the required solution for the Windhoek situation.

This chapter gives in detail the method used in carrying out this research which is participatory design of self-organized groups, neighbourhood committees, steering committees, NGOs, financial institutions and the private sector. As explained in chapter one, the design seeks to address the research problem of the city of Windhoek which is currently facing a slower pace of land servicing and development that has seen the gap between demand and supply widening uncontrollably thereby ballooning the back log raising levels of accommodation blues to escalating heights. The design would bring out the primary objective of how to explore the various collaboration options available for

the delivery of adequate, affordable and quality public services between the public and private sector organizations using global best practices to the Windhoek residents.

3.1 Research Methodology

The descriptive survey design method was the most appropriate method to arrive at answers to the research questions, which their answers contributed, to answering the main problem. The researcher felt that, the method could establish the nature of existing conditions to be studied. By using a survey design the researcher collected a lot of data on opinions, attitudes and feelings of the sample population. The researcher consulted various urban development experts before undertaking the research. At the same time the researcher drove around the City to familiarize himself with the various infrastructures around the City. The specific objectives of the research mapping included:

- Soliciting the views and comments of experts and participants on the clarity and perceived usefulness of the research.
- Identifying other issues affecting municipal service delivery that might have been missed on the initial research proposal.
- Identifying existing literature and how the study can access such information
- Sourcing suggestions on the data needed for the research and possible methods for collecting it.

The research mapping exercise was a success. Experts provided useful suggestions and participants made comments that were incorporated into the overall research strategy. Useful contacts for the research were obtained at this stage.

3.2 Population

Farrant (1980) describes the research population as the totality of items under consideration. For example the research population for this research included self-organized groups, neighbourhood committees, steering committees, NGOs, financial institutions and the private sector. Data will be collected from a sample of 200 employees from city of Windhoek, property developers, independent experts and employees from the ministry of housing and rural development using questionnaire methods.

3.3 Research Methods

To understand the gaps that the current models have in service delivery, this research adopts a participatory case study research strategy. Participatory research method is used for this study and it is geared towards planning and conducting the research process with those people whose life-world and meaningful actions are under study. The researcher engaged in interviews with the affected stakeholders like the local community finding out how extensive the effects of the delays in service delivery by giving out questionnaires and doing the actual observation of how municipality employees actually take out their duties on carrying out their servicing work. Also input from focus groups and the NGOs was used by this researcher in trying to ascertain a way forward, suggestions and areas of lack in the system.

Several case studies from countries where different models have been applied were selected and analysed. As a result of its massive inclusion of different sources of research data, this research employed both qualitative and quantitative research techniques combining secondary and primary data collection methods. In summary, the

methods chosen by the researcher for this research included interviews and focus groups, but also incorporated a questionnaire, photography projects, blogs, diaries and mapping processes as ways of generating data. There was need for a preliminary research mapping which was done before the actual research was done which took the researcher 2 days to accomplish.

3.4 Primary Data Collection

Various methods of primary data collection were employed. The research questionnaire was the key method employed. A questionnaire containing both open ended and closed questions was distributed through the fax, email and direct delivery methods. Other methods used included in-depth face to face interviews and telephone interviews.

Primary data collection targeted officials working in municipalities, banks, property development organizations, ministry of lands, ministry of housing and other players in the urban housing and services delivery equation. Local authorities provided key information on serviced land delivery, the impact of planning frameworks on services delivery and information on how the different models that the city of Windhoek has adopted has resulted in improvements in the provision of affordable housing and infrastructure.

Interviews with officials from the ministry of housing provided key information on the history of informal settlements in Windhoek, development of informal settlements, land transactions and the involvement of government in the land and infrastructure market. Property officials and development organizations officials were useful in providing information on their possible involvement in public projects, potential changes

in the future of private public partnerships and other possible means of co-operation between the private and the public sector. Bank officials on the other hand provided key information on the availability and forms of financial instruments that have evolved in the past and present for financing public projects that municipalities are responsible for in Namibia particularly in Windhoek.

3.5 Secondary Data Collection

This study made extensive use of documentary sources of information. The internet provided the bulk of case studies for review. Different publications and unpublished papers were downloaded from the internet and academic data bases on different service delivery models, their past application, where they have succeeded and where they have failed. Another source of secondary data was policy documents, the ministry of housing and the City of Windhoek were the major sources for policy documents. Finally books on housing and municipal finance provided important secondary data.

3.6 Research Instruments

Research instruments are the instruments that are used to collect data, they include questionnaire, interview guidelines, observation protocols and records.

3.6.1 Questionnaire

According to Farrant (1980), a questionnaire consists of relevant and carefully constructed questions, which enable the researcher to carefully analyse and make sound conclusions. The questionnaire is usually in print and is answered by a group of people;

the intention is to get facts, information or opinions on topic. By answering the questions the respondents will supply data that would be analysed.

The questionnaire had several advantages over other instruments. It can be easily administered and saves time and money. Questionnaire can be sent to respondents by some postal system and this saves the researcher from traveling from place to place ferrying questionnaires and collecting them back. This was less expensive when compared to interviews. Questionnaires also have the advantage that respondents work independently, usually in isolation from others and this means individuals are not influenced by others. The absence of the researcher makes the respondents task oriented. The researcher's facial expressions, voice projection and intonation or probing may help the respondent predict what the researcher is looking for. All influences are avoided when using the questionnaire. Questionnaires do not require any form of identity for instance nobody needs to identify the paperwork with the respondent as they are anonymous. The researcher has no interest in the respondents, but in their contributions in the form of responses (answers). This also makes it easier for researcher to clarify data.

Despite the various strengths of the questionnaire, it still has its own disadvantages. After receiving the questionnaire some respondents sit on them and not bother to return to the researcher. The researcher had to do a follow up on all respondents who did not respond and ask them to do a favour by completing and returning the questionnaires, which at times helped. Questionnaires also failed to probe the respondents when they either give inadequate or interesting answers, which need further expansion. The researcher solved this problem by carrying out interviews whereby some answers were probed further. Another problem was relaxed to the construction of the question

itself, whereby questions have to be clearly stated and logically sequenced, in order to collect relevant data. In order to solve this problem the researcher made sure that the questions were linked to the sub-problems of the research and that they were coherent and that it did not collect unwanted information.

3.6.2 Interview

Hornby (1995) defines an interview as a meeting between two people to discuss important matters usually rather formally.” Interviews have the advantage of high rate of response. There was room for probing and clarification whereby respondents explained and expanded their views. The presence of the interviewer ensures that, nobody else contributes to answering of the questionnaire other than the particular respondent. Non-verbal responses can be observed and noted. Some questions were rephrased or asked in vernacular to enable the interviewer to get a clearer understanding.

The disadvantage of face-to-face interviews were that, they were time consuming since the researcher had to move from place to place and locate the respondents within the factory. Some respondents shied away from possible sensitive questions, for instance most managers did not want to disclose their salaries for reasons of confidentiality, and therefore the researcher had to go to great lengths in assuring them that their confidentiality would be respected. And lastly mutual trust and social distance differed considerably from one respondent to another. To solve this problem the researcher had to establish rapport with the respondents so that they are at ease and then respond to the questions without apprehension. How the interview was carried out is explained under data collection procedures.

3.6.3 Observation

Kwesu et al (2005) stated that “direct observation is whereby data is collected by way of observing the number of respondents in action. Direct observation was used for this survey and this did not involve personal details of individuals. The researcher collected data by way of observing employee behaviour indicators such as, lateness for work, absenteeism, pace of work, complaints by employees and generally employee morale, including the sub-problems.

The advantages of observation were that there was no room for probing further or investigating behaviour further. It is time consuming. As a manager if workers are aware of your presence they behave in an artificial manner. The researcher tried by all means not to catch the attention of workers when investigating such aspects as pace of work. The validity and reliability of questions under observation were checked so that the researcher avoided some behaviours that were not relevant to the study.

3.6.4 Records

Records are information kept in a permanent form, for example written or printed. Selecting data from existing documents is sometimes referred to as, “interrogating documents.” The researcher inspected files in the personnel office at the factory. Information was recorded under the following headings: absenteeism, turnover, lateness of service, age and gender. Records from the production office dealt with productivity output and quality.

3.6.5 Pilot Testing

Pilot testing is a mini-survey which tests the questionnaire, enumerator techniques, all field work plans, data entry and analysis. The purpose of the pilot testing was to assess the effectiveness of the instruments used and then perfect or improve them. The other purpose was to test the questionnaire one last time, fine tune the data organization procedures, test and further develop the data analysis plan and determine the sample size.

The researcher consulted his supervisor and both made some adjustments on the questionnaire. Changes were made to the questions such that they reflected the sub-problems of the study, of which answering them gives the answers to the main question of the study. The questionnaire was also added with questions on management and leadership behaviours or attitudes that affect motivation. For instance, questions on attitudes, questions that lead to high motivation that was career development, challenging assignments and questions on conditions of service, mission statement, organizational structure and culture were added.

Reliability was tested by asking one and the same question on different positions. However asking the same question led respondents into feeling that, a mistake was made, and therefore respondents were asked to answer all questions.

3.7 Methods of Data Analysis

Data collected using the various methods described above was analysed using qualitative and quantitative techniques and then presented using texts, tables, charts and figures. Descriptive statistics was made to support specific trends and draw conclusions

based on quantitative data. The sample was selected using a two tier stratified random sampling method, with the first stage selecting the institution to participate and the second stage selecting individuals to be included in the sample. Interviews will be used as a supportive means of data collection.

3.8 Study Area

This study was carried out in Windhoek. The area was selected because the researcher resides in Windhoek and Windhoek being the capital city of Namibia has been experiencing the pressures of urbanization. Primary data collection was also done from organizations located within a radius of 30km from the City Centre. Other areas with similar characteristics both in Africa, Europe, America and Asia were used as inferences using mainly secondary data.

3.9 Validity and Reliability

Bailey (1978) identifies three types of validation namely face, content and criterion validation. For the purpose of this study, face validation was simpler to apply. Bailey (1978) defines this as a matter of judgment. It asks whether the instrument (questionnaire) is really measuring the behaviour that the researcher designed it to measure. It also questions whether the instrument provides an adequate sample of the kind of behaviour. For the researcher to know whether the measuring instrument had face validity there was need first to know the sub-systems of the study being measured and whether the information being gathered emanates from the concept. Hence all questions went through face validity before they were included in the questionnaire and those without face validity were removed.

Bailey (1978) describes reliability testing as, detecting the consistency of a data collecting instrument. If the instrument is used again on the same person after some time (say in February or March) it has to obtain the same information. If it does, then the instrument is said to be reliable. The researcher solved this by asking some important questions twice to those not included in the sample to find out whether they come up with the same response. Ambiguity was also avoided, as it would affect consistency. Hence a follow up with interviews helped in probing and clarifying some questions.

3.10 Limitations of the Study

This study refers mainly to the case of Windhoek. Experiences of other towns in Namibia were not included due to time constraints. Some key participants in the municipal infrastructure and land servicing process did not participate in the study. To alleviate the effects of some important institutions not being able to participate, the researcher made an effort to collect a lot of secondary data. This data was used to infer to the experiences of other towns both in Namibia and other countries.

3.11 Data Presentation and Analysis Procedures

Data presentation is the presentation of raw data in an organized and meaningful way and data analysis as separation of raw data into parts for performing a detailed examination. Data presentation was presented using statistical analysis organized and presented in a meaningful way. Data was depicted by means of tables, graphs and charts. This had the advantage of presenting the data in a clear, readable manner and allowed the reader to see clearly the relationships and patterns of responses.

Tables provide a way of coding data according to types. The tables showed the numbers and percentages, reflecting respondents' opinions and attitudes. The titles of the tables reflected the demands of the research questions (sub-problems).

The analysis of data put value to the data. The researcher's concern was to classify data according to type, sources, functions, characteristics, and quality and more importantly according to sub-problems. The classification made it possible for the researcher to analyse and interpret data.

3.12 Conclusion

The researcher identified the research design. The population and the sample were clearly defined and discussed. The instruments for collecting data were identified as the questionnaire, interview, observation and records. The researcher also discussed various procedures in data collection, presentation and analysis. The next chapter will look at results and data analysis.

CHAPTER 4

DATA PRESENTATION, ANALYSIS AND INTEPRETATION

4.0 Introduction

This chapter presents the results of the analysis of the responses made to the questionnaire schedules administered to the sampled groups in Windhoek and the interviews administered. The overall objective of the study was to evaluate and assess an effective and efficient land development, servicing and service delivery in Windhoek. Data was analyzed from different responses from the sampled groups. Primary and secondary data was analyzed. The primary research question in the study was to investigate the determinants of effective and efficient land development, servicing and services delivery. Data analysis in this study was done in such a way that it responds to the research questions and objectives of the study. Interview data analysis was done in relation to secondary data.

Main question

What are the determinants to an effective and efficient land development, servicing and service delivery system?

Sub question 1

What are the determinants to land ownership in Windhoek?

Sub question 2

What are the determinants to land development and land service delays by the city of Windhoek?

Sub question 3

What are the causes of land shortages in Windhoek?

Sub question 4

What could be the solutions to land shortages in Windhoek?

Sub question 5

What are the alternative models to land development and services delivery in Windhoek?

Sub question 6

What policy are put in place and what policy adjustment are necessary to achieve effective land development and serving in Windhoek?

4.1 Sample characteristics

In the beginning of the chapter are the sample characteristics of the respondents such as the profile of the participants, gender, and housing status of the respondents were analysed.

Table 1: Respondents Analysis

Gender	Frequency	Percentage representation
Male	48	60
Female	32	40
Total	80	100

There were more males than females who participated in the study, 60% were males and 40% were females. Though the research would have preferred that the gender be balanced it was difficult considering the fact that some sample groups were purposefully selected due to their expertise and it turns out that more males suited the selection criteria than females. The objective of the study sought to evaluate land development and delivery systems in Windhoek and henceforth it affect all gender, males and females alike.

Table 2: Sample Characteristics

Sample Group	Sample Group Number	Number of Participants	Percentage representation
City council/municipality	001	5	6
Property development	002	10	13
Ministry of national housing	003	5	6
Town planning office	004	5	6
Private sector	005	10	13
Community members	006	20	25
Property/Land seekers	006	20	25
Policy makers /politicians	007	5	6
Total	8	80	100

A purposeful sample of five employees from the city of Windhoek was selected. These employees were working directly with issues relating to land development. A simple random sample of land developers was selected from the land developers that the city of Windhoek has been working closely with in the past five years. The trade directory was used to select the identified land developers. The sample was selected

without replacement meaning that the chance of each of the developers in the sample had a chance of $1/(p - n)$ of being picked at each point ; where p is the population size and n is the number of items already selected. In this sample no judgmental procedures were required since it was a population of experts and thus the researcher was guaranteed that everyone selected in the sample possessed the required information. Out of the samples selected from property developers of the scheduled 15 potential interviewees, 10 were successfully selected.

The ministry of land made the third sample group with only five selected participants, considering how busy the ministry was, it was justifiable to work with the sample of five, which was purposefully selected on grounds of expertise on the subject matter. The town planning office made the sample group four; it was made up of a five participants who were purposefully selected on grounds of expertise on the subject matter. The sample group of private sector was made of participants from all sectors and simple random selection was used to select the participants in this sample group. The participants were 10 in number. The selection of this group was based on simple random systematic sampling from 20 participants who made the sample group five of community members. The rationale of having 20 participants in this sample group was that, the issue of land and land appropriation affect everyone and in most cases it affects the community or the layman who is the person in real need of land.

Community members are suitable for this group and henceforth their contribution to the study is of great importance. Property seekers made the sample group 6; this group was carefully selected using purposeful sampling technique. A list of people who are on the waiting list was obtained from the national housing enterprise, from the list a simple

random selection was used to come up with the participants. Considering that the list was very long, it was then necessary to come up with 20 participants and yet 20 is still an insignificant number as compared to the number of people on the waiting list to acquire land which has passed 150 000. The sample group of policy makers and politicians was constituted based on a Judgmental sample of high ranked political officers with interest in land use was selected for both interviewing and questionnaires. A total of five politicians were selected. Two for interviewing while three were selected to complete questionnaires. The table below shows the sample distribution and response turnout.

Table 3: Sample Distribution and Respondents Analysis

SAMPLE DISTRIBUTION AND RESPONSE TURN-OUT						
Research Tool →	Interviews			Questionnaires		
SAMPLE GROUP	No	%	Turn out	No	%	Turnout
City council/municipality	3	8	3	2	5	2
Property developers	5	13	5	5	13	5
Ministry of housing	2	5	2	3	8	2
Town planning office	3	8	3	2	5	2
Private sector representative	5	13	5	5	5	5
Community members	10	25	10	10	25	10
Property /land seekers	10	25	10	10	25	10
Policy makers/politicians	2	5	3	3	8	2
Total	40	100	40	40	100	39

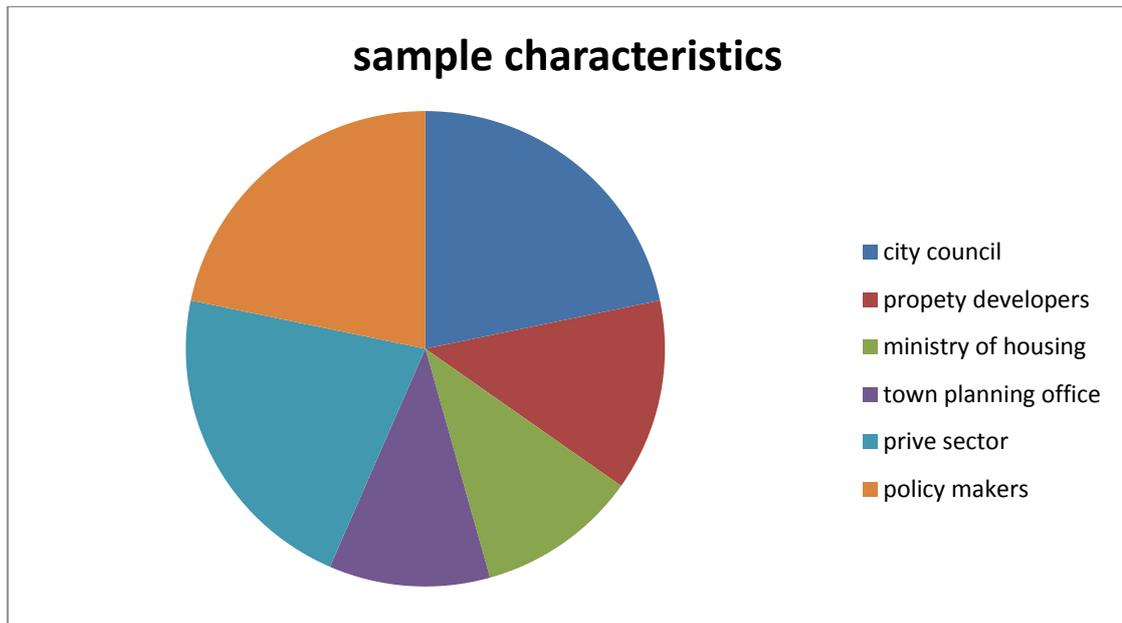


Figure 6: Sample characteristics

4.2 Determinants of Land Ownership and Servicing Demand in Windhoek

The objective of the study was to investigate and analyse the determinants of land development and servicing delivery in Windhoek. The table below shows the residents status of the participants in order to determine the ownership of land.

Table 4: Resident Status/land Ownership of Participant

Criteria	Number of participants	Percentage %
Residential house owner	20	25
Business land owner	5	6
Residential stand owner	20	25
On waiting list	25	31
No resident status	10	13
Total	80	100

Out of 80 participants 45 participants were either owning a house or owning a residential stand or plot. This means 56 % of participants owned land and the reminder 44% did not own land at all. This information cannot be representative of percentage of people who are on waiting list for land, but it can shade light on the extent of the problem of land shortages. 25 out of 80 participants are on waiting list for land that is 31% of the participants are on the waiting list for land.

Table 5: Categorical Distribution of Land Ownership

Criteria	Number of land owners	Period in years										% Of land ownership
		1-3		3-7		7-10		Above 10		Total		
		No	%	No	%	No	%	No	%	No	%	
Residential house owner	20	2	10	4	20	10	50	4	20	20	100	44
Business land	5	1	20	-	80	4	80	-		5	100	12
Plot owners	20	3	15	3	15	9	45	5	25	20	100	44
No land		-		-		-		-		-		-
Total	45	6	13%	7	16%	23	51%	9	20%	45		100

Table 5 shows the response from the participants who own land and the period they waited to acquire land. Out of the 45 participants 20 own houses, five own business property, 20 are plot owners. The majority of the house owners 50% of them have taken more than 7 years to be granted land, in other words they waited for more than seven

years to get land. 80 % of business owners have taken more than 7 years to acquire their business premises. 70 % of plot owners have taken more than 7 years to acquire land, 25% of them have even taken more than 10 years to acquire land. In general the majority of the participants took more than 7 years to acquire land; this explains the current situation whereby more than 200 000 applicants of land are still at the National Housing Enterprise in Windhoek alone (NHE, 2011). It is safe at this time to conclusively say that land development in Windhoek is being hindered by long delays of servicing and appropriation of serviced land by the relevant authorities. The diagram below shows the period taken by the participants to acquire land.

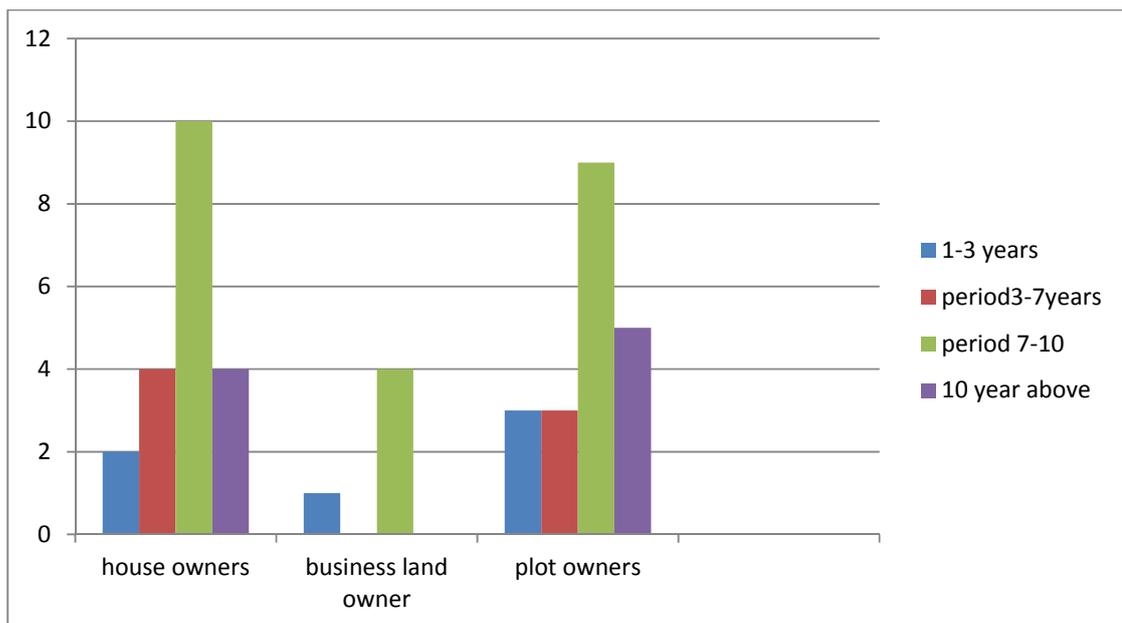


Figure 7: Period of property ownership

4.3 Factors causing delays in land development and servicing in Windhoek

The following diagram indicates the causes of delays in land development and servicing in Windhoek.

Table 6: Delays in Land Service Delivery

Criteria	Strongly Agree		Agree		Neutral		Strongly Disagree		Disagree		No response		Total Responses
	No	%	No	%	No	%	No	%	No	%	No	%	
Finance	50	63	20	25	10	13	0	0	0	0	0	0	80
Unavailability of serviceable land	50	63	25	20	5	6	0	0	0	0	0	0	80
Municipal rigidity and delays	60	75	20	25	0	0	0	0	0	0			80
Poor registration records	20	25	40	50	10	13	5	6	0	0	5	6	80
Land use controls	30	38	30	38	5	6	5	6	0	0	10	13	80
Unbalanced demand and supply forces	35	44	30	38	5	6	7	9	0	0	3	4	80
Poor land policies	45	56	25	31	3	4	2	3	0	0	0	0	

The following are problems faced by the municipality in terms of land development and servicing. These problems were identified through secondary sources, documented and printed material about the land development in Namibia. The objective was to evaluate the extent of these problems and to assess the participants' ratings of the problems. The research sought to capture the opinions of the participants on factors causing the long delays in land servicing and appropriation of land to the applicants. The factors indicated in the table above were identified through secondary sources of data on records of land development in Windhoek.

The idea was to rate these known factors to identify the extent of influence these factors have on land development. A rating scale was used in this question posed to the participants through the questionnaire and the interviews as well. 63% of the participants strongly alluded that finance is a major cause of land shortages and 25% agreed to the same notion bringing the total to 87% of the participants pointing to the problem of finance being the cause of delays to land development and servicing.

The unavailability of serviceable land was identified by the participants as one major factor, with 63% strongly contending to that, and 25 % agreed to the same notion bringing the total to 88% of the participants agreed that unavailability of serviceable land. Municipal rigidity, delays and regulations have been cited by the participants as the major cause of the delays to land development. 75% of the participants have alluded strongly to that. A furthered 25 % agreed to that notion bringing the total to 100%. All the participants agreed that the bureaucratic structure and rigidness of the municipality has caused delays and ultimately have affected land development and service delivery in Windhoek.

Poor registration and land control is one factor that was identified through secondary sources of data and the participants have rated this factor as a key factor that contributed to the problems. 25% strongly agreed and 50% agreed bringing the total to 75%. Unbalanced market forces have been identified as a major factor causing problems in land development. Windhoek is one of the most expensive cities in the world in terms of accommodation and property. Issues of prices work hand in hand with demand and supply. The supply of land in Windhoek is exceeded by the demand. This can be supported by the concentric zone model that purported those issues of land patterns and zoning can restrict the supply of land in the urban areas (Burgess, 1990).

In order to plan for adequate supply of land, for most cities the states, territory and local government have responsibilities for the planning of the strategies and policies in relation to urban land supply and use in general. The state and territory government outlines the strategic land use plans which provide broad planning policy directions to deliver a range of economic, social and environmental outcomes. The local government must have regard to the state and territory plans in the preparation of more detailed local government plans. This should contain the development controls which form the basis for assessment of development applications. According to the National Housing Enterprise (2012), 44% strongly agreed to that and 38% agreed to that as well bringing the total to 82% of the responses agreed to this factor. Land policies in Namibia have been under scrutiny of late. The national policy on land development indicates that, the land policy in place is contributing to land development problems. The respondents have alluded to the same, 45% strongly agree to the notion that land policies are contributing to land

servicing delays. Another 56% agreed to that as well, bringing the total to 94% of the responses agreed to that.

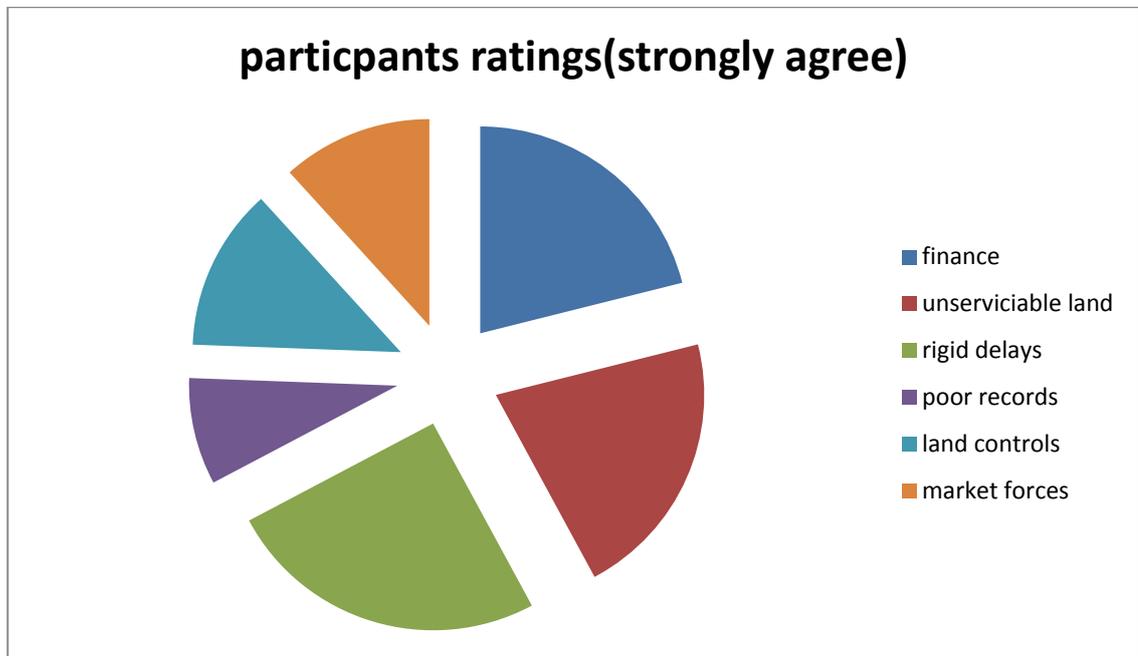


Figure 8: Participants opinions of land service delivery

4.4 The determinants to land shortages in Windhoek

Table 7: Land shortages in Windhoek

CAUSES OF SERVICED LAND SHORTAGE IN WINDHOEK											
CAUSE CATEGORY	Response										
	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Total Responses
	No.	%	No	%	No	%	No	%	No	%	
(A) Lack of Financial capacity by the city of Windhoek	70	88	10	13	-	-	-	-	-	-	
(B) Rapid rural urban migration	35	44	35	44	10	13	-	-	-	-	
(C) Cumbersome and slow land transactions	60	75	8	10	8	10	2	-	2	3	
(D) Distortions and Speculation on the land markets/market forces	44	55	25	31	5	6	2	3	4	5	
(E) Poor land policies	55	69	22	28	3	4	-	-	-	-	
(F) Lack of serviceable land	40	50	10	13	5	6	5	6	20	25	
(G) Lack of other necessary resources such as water	34	43	10	13	15	19	20	25	1	1	

What do you consider to be the best solutions to the problems of land development and servicing in Windhoek? The respondents were posed with this question. The respondents responded by ranking the best possible solutions to the problem, of land development and servicing in Namibia. The solutions highlighted were already identified by the research through secondary data of records, policy documents, newspaper articles, case studies of other countries that have gone through the same problems as Namibia. The ranking scale was made of 1-5 points. The participants were to choose which points to allocate to the question. 70% of the respondents strongly agree that lack of financial capacity by the city of Windhoek is a major cause to land shortages, 13% agree to this notion. 35% of the responses strongly agreed on rapid urban migration to be one of the causes of land shortages. 44% agreed to the same notion.

Slow land transactions was indicated as one of the factors that causes shortages of services, 75% strongly agreed to that factor, 10% agreed to the same factor bringing the total to 80% have agreed to the same notion. Unbalanced and distorted market forces are identified as a factor that causes land shortages, 55% strongly agreed to these factors, 31% agreed to this factor bringing the total to 86% of the responses agreeing to this factor. Poor land policies have been cited as one major factor that causes land shortages, National Housing Enterprise (2012). 69% strongly agreed to this factor, 28% agreed to the same factor bringing the total positive respond to 95%. Lack of serviceable land has been pointed as one of the factors that cause land shortages this has been supported by the 50% strongly agree to that notion, and another 13% simply agree to the same factor. Lack of resources has been identified as one cause of land shortages, this was supported by 43% of respondents strongly agreed to that, 13% simply agreed bringing the total to 56%.

4.5 Solutions to land development and servicing problems in Windhoek

The participants were asked questions on the possible solutions to land development problems. The solutions were identified through secondary data. The participants gave their opinion through a rating system of the solutions. The rating scale had 1 -5 points.

Table 8: Solutions to Land Development

SOLUTIONS TO LAND DEVELOPMENT PROBLEMS IN WINDHOEK										
SOLUTIONS CATEGORY	NUMBER OF POINTS									
	5		4		3		2		1	
	No	%	No	%	No	%	No	%	No	%
(A) Privatization of Land servicing	66	83	10	13	4	5	0	0	0	0
(B) Public Private Partnerships	40	50	20	25	10	13	5	0	5	6
(C) Increase in Public sector allocations for land servicing	60	75	20	25	0	0	0	0	0	0
(D) Simplifying land transfer procedures	61	76	19	24	3	4	1	0	0	0
(E) Investment in support services-water and waste collection	30	38	32	40	10	13	4	0	4	5
(F) Deregulation	60	75	20	25	5	6	0	0	0	0
(G) Increasing urban use supply	62	78	18	23	3	4	0	0	0	0
(H) Converting rural land to urban	63	79	15	19	2	3	0	0	0	0
(I) Simplified land use development controls	50	63	20	25	5	6	3	4	2	3
(K) Land supply and demand balance	62	78	18	23	0	0	0	0	0	0

Respondents were presented with a questionnaire to respond to structured questions, one of the questions was to identify the solutions to land problems in Windhoek. The participants were given a list of solutions and they were simply asked to give a rating to these solutions in order to identify which of the solutions was to be the best solution. A rating scale of 1 to 5 points was used to rate the solutions. 66 out of 80 respondents gave a scale of 5 to solution (A) that is 83%. On the second solution (B) of public and private partnerships, 60 of the respondents gave a rating of 5 on this solution that is 75% of the total population. The remainder 20 gave a rating of 4 and that is 25% of the respondents. Solution number (C) simplified land transfer, 61 out of 80 gave a rating of 5 on the solution (D) that is 76 of the population in support to that solution.

The remainder 19 chose a rating of 4. Support services of water and waste (E), 30 out of 80 participants gave a rating of 5 points, 32 gave rating of 4 points that is 40%, 13 gave a rating of 3, 4 gave a rating of 2 and the last gave a rating 1 (F) is a solution on deregulation. 60 out of 80 participants gave a rating of 5 points to this solution. That is 75% of the participants. The remainder 20 of the participants gave a rating of 4 points. Increasing urban land supply was solution (G), 62 out of 80 participants gave a rating of 5 to this solution, which is 78%, the remainder 18 gave a rating of 4 points and that is 23%. Solution (H) was about converting rural land to urban land, 63 out of 80 participants gave the 5 point rating on the solution of converting rural to urban land, the remaining 15 choose a rating of 4, and the last 2 choose a rating of 2. Solution (I) was about land use development controls 50 out of 80 participants choose this solution, which is 63%. Solution (k) was about bringing a balance between supply and demand of land.

62 out of 80 gave a rating of 5 points to this solution, which is 78%. The other 18 participants gave a rating of 4 to this solution, and that is 23% of the population.

4.6 The Alternative Models for Land Development and Servicing in Windhoek

The participants were posed with the question on their opinion on alternative models to land development and servicing. The participants were guided with alternative models to make a choice from. Core and Nicholuson (1991) established theoretical models of land development and these theories are being applied in most urban development. The following models were identified by Core and Nicholuson (1991):

- **Sequential or descriptive model**

It depicts the developmental process as a chronological order or sequences of stages.

- **Behavioural and decision making**

It emphasizes the roles of different actors in the process and the importance of decision making in determining the course of action

- **Production based**

Portray the development process as a specialized form of productive economic activity and tend to view it from the perspective of the economy as a whole

- **Structures of provision model**

It contends that different types of development are characterized by different institutional, functional or legislative framework.

Healey (1991) also came up with his own version of land models:

- **Agency model**

Focuses in the actors in development process and their relationship

- **The equilibrium model**

It assumes that development activity is structured by economic signals about effective demand as reflective in rents, yields (etc.).

Table 10: Alternative Land Development Models

Category (Alternative models)	Agree		Neutral		Disagree		Total Responses
	No	%	No	%	No	%	
Government acquiring majority land for housing and development (Structure model)	65	81	10	13	5	6	80
Partnership between government and private developers (Structure model)	67	84	8	10	5	6	80
Deregulation (Structural and behavioural model)	72	90	8	10	0	0	80
Rural land acquired for urban development (Sequential and structural model)	60	75	20	25	0	0	80
Policy adjustment (Behavioural and structural model)	78	98	2	3	0	0	80
Increase supply of land (Production model)	59	74	21	26	0	0	80
Adjustments of concession terms and land tenure policies (Structural model)	58	72	20	25	2	3	80

The first model was that of government taking the initiative of acquiring the land and service the land. 81% of the participants agreed to this notion. 13% were neutral and only 6% disagrees. The second alternative was that of partnership between the government to solve the issue of land development and servicing. The majority of the participants agreed to this notion, 84% agreed to this model, 10% were neutral and 6% disagrees. The regulation on land servicing and development seems to be a course of concern, since the majority of the participants alluded to deregulation as a better model of possible land development. 90% of the participants agreed to this model, 10% were neutral. The majority support the model of acquiring rural land for urban development, 75% agreed to this notion and 25% choose a neutral answer.

Policy adjustment has received an overwhelming respond 98% of the participants agreed that there is need for policy adjustment in order to deal effectively with land development and servicing issues. The other model identified is that of the increase in the supply of land 74% agreed with that model, 26% choose to be neutral. Concession terms and land tenure policies are models that can be considered for effective remodelling of land policies. 76 of the participants supported it. Considering the socio- economic and political context and property rights and registration in Namibia, urban land development model needs to be developed according the responses given. A model that suggests that urban area in all its diversity such as residential, commercial, industrial etc. is the result of land development when both public and private sector partners.

4.7 Policy Adjustment Necessary to Effective Land Development and Servicing in Windhoek

One of fundamental questions was that of policy adjustment. The participants were responding based on their opinions on policy adjustment. Different categories of policy adjustment were posed to the participants.

Table 11: Policy adjustment

Category	Agree		Undecided		Disagree	
	No	%	No	%	No	%
Privatization of land	75	94	5	6	0	0
Introducing housing subsidy	74	93	4	5	2	3
Security of land tenure	49	60	31	40	0	0
Change the regulatory environment	69	86	7	9	4	5
Increase urban land supply	69	86	11	14	0	0
Adjust national development plans	73	91	7	9	0	0
Adjust the national development act	40	50	40	50	0	0
the national housing enterprise(NHE) need adjustment	76	95	4	5	0	0
Integration of housing & service infrastructure	69	86	10	13	1	1

Privatization is one key policy that is recommended by 94% of the participants. Housing subsidy has been agreed upon by 93 % of the participants 5% undecided and only 3% disagree. 60% of the respondents agreed on security of land tenure and 40% declined. 86% agreed to the change of the regulatory environment, 9% was undecided and only 5% declined. The increase of urban land supply from rural land or farming land has received overwhelming support, as 86% agreed to it, only 14% disagree. The national development act received 50% support and the other 50% were undecided. 95% of the respondents agree that the NHE need adjustment, only 5% were undecided on this category. The housing and service infrastructure ought to be intergraded, 86% agreed to this kind of adjustment and 13% was neutral, only 1% disagrees.

4.8 Analysis of Interview Data

The research carried out interviews to selected sample groups. These samples were purposefully selected to participate in the interviews because they are experts in the field of land development and servicing of land or they are working hand in hand with the stakeholders of land development, appropriation and management in Namibia. All sample groups are represented in the interviews. The total number of participants in this study was 80 and half of the population was administered with questionnaires that are 40 participants and the other half of 40 participants took part in the interviews. The rationale of dividing the population to two instruments was to gather depth information from both the instruments. A total of six questions were asked to the participants and all the questions were structured. The interview analysis was done within the framework of supporting secondary data.

The process of coding was used in the analysis of the interview responses' from a group of participants who were purposely selected. Throughout the interviews data was analysed using a system of coding. The response was coded into categories and themes were identified from the categories. The following themes were identified from the chunk of data from the interviews. The interview data analysis was done in relation with secondary data.

Determinants of Land Shortages

According to research interviews carried out which sought to understand the participants opinion about land access. The majority of the participants agreed that there are land shortages in Windhoek. The participants were asked about their opinion about land access and availability. Most of the participants responded with negative answer that land is no available in Windhoek. One respondent said,

“Land is difficult to get because there is no land at all, land is in short supply”

This confirms reports from National Housing Enterprise (NHE, 2012). The NHE has a list of land applicants and this waiting list is having more than 100 000 applicants, who have applied for land for the past six years or more. The NHE report of 2011 pointed clearly that one major challenge was servicing the land and that the available serviceable land is not meeting the demand. One respondent said that,

“It seems there is no land that is suitable for residential and business development because of the geographical factors”

Access to land has been the biggest problem of most land seekers, both business land and residential land. The national housing policy of January 2000 declares that everyone should have shelter since it is one of the fundamental basic human rights. The national policy declares that everyone should have shelter that is healthy, safe, secure, accessible and affordable, that includes basic services, facilities and amenities and should enjoy freedom from discrimination, in housing and legal security of tenure. The majority of the respondents alluded to the fact that there have been applying for land but the reply they get was that the land was not available yet.

“We have been waiting for plots that we applied for 6 years ago; maybe there is no land after all”

According to the report of the national housing policy of 2011, the city was taking a holistic approach of the problem of land, housing and services by giving priority to the existing deficient settlement (the “back log”). The focus of the City according to national housing policy 2012 was to upgrade the existing settlements and the city was on the early stage on implementation of the project. The city policy documents acknowledge that there are land shortages and they attributed it to urban problem constraints and urban pressure. Many respondents agreed to this as well, one said

“The demand for land is too high because the population in Windhoek is growing and yet there is no land available for the people.”

Determinants of land delays to Land Servicing

One of the objectives of this study was to find out what causes land development and servicing delays in Windhoek. The respondents were asked their opinion on the land

service delays in Windhoek. One theme that was identified is that land servicing is taking long and so is the land allocation for development.

“I have applied for the land for land 8 years ago and I’m still on the waiting list”

“The land allocation is just impossible”

Most of the respondents alluded to a number of factors that contributed to the delays in land servicing delays. One responded said,

“There seem to be no enough servable land in Windhoek”

According to the responses of most applicants, it seems that land servicing is a costly exercise and therefore the municipality has used large sums of money for servicing smaller pieces of land. The issue of finances has been alluded to by many participants.

“It is costly to service land which is why land delays are there, because the money will not be available to service the required land.”

Poor institutional arrangement has been pointed to by many responses as one of the factors that cause land delays in Windhoek. The theme identified here was that, the municipality regulations are rigid and time consuming. One responded said,

“There are rigid procedures at the municipality and even the NHE and it is also difficult to access information”

Poor institutional arrangement and procedures can lead to delays in land servicing and development, slow and costly transaction, corruption, land appeal and increase

uncertainty in the decision making (Spoor, 2004) the respondent has pointed out that the municipality has got a rigid arrangement, one responded said,

“There are a lot of uncertainties with regard to land and plots and procedures to be followed”

According to the report of USAID of (2005), most governments in developing countries are faced with problems ranging from poor or rigid institutional arrangement, incomplete land data and procedures ,uncertain factors such as human and technical resources .in most of the developed countries ,every asset ,piece of land ,every house is formally fixed in updated records governed by rules contained in the property system and their property rights are secure .in the case of Namibia , according to the respondents the majority of the people do not have access to land acquisition procedures and regulation some respondents identified the issue of land controls and poor registration as some of the factors that contribute to the delays. One participant alluded,

“The registration procedures and system is poor and records are not kept properly”

Re addressing land policy and policy adjustment

One of the fundamental research question and object was to find out what the respondents perceptions on the laws, regulations, and policies on land development and servicing in Windhoek. The respondents were asked questions on land policy, their opinions on the land policy. The majority of them almost 100% of the responses pointed that there is need for policy adjustment. As been eluded by one who said?

“The policies in Namibia are outdated and they need to be changed, they must go along with the situation now”

The National Housing Enterprise (2012) identified the crisis of land use planning in Namibia. Most participants alluded to policy change or policy adjustment. One participant said,

“The policies are not good enough. The municipalities need to change their policies on land “

The national housing policy recognized that there is need for land use regulations. The government identified the” vision 2030” as a solution or policy towards dealing with land problems. Most global and national policy documents challenge that land administration systems need to adopt a new strategy to cope with the poor land management, suitable development and economic growth (Molen, 2006). Most respondents in this study have pointed out there is need for effective land policy in Namibia. This has been alluded to by one participant, who said,

“There is need for new effective land policies in Namibia. Some of the problems have been created by the previous apartheid government “there is need for effective land reform.”

Land reform might have different meanings (UN/ECE, 1996) and it is concerned with the intervention in the prevailing pattern of land ownership, control and usage (Macmillan, 2000). Land reform has been pointed out by a number of respondents as a key factor that needs to be addressed. Land privatizations have been identified by the factor of adjusting the land policies.

Solutions to land development and servicing problems

The respondents were asked to come up with possible solutions to the problems of land development in Windhoek. The majority of respondents have identified the following as the possible solutions: deregulations, acquiring land from rural areas, policy adjustment, deregulation and market forces.

Most of the respondent alluded to these factors, as the possible solutions to land problems .one said,

“They must change the regulations”

“The municipality needs to find new policies”

The majority of the participants have identified the same problems. The same problems were also identified by the national housing policy of 2012, which identified that in order to meet the government “Vision 2030”. VISION 2030 among others is a government initiative to solve the problem of land and housing in Namibia. In this respect, the government has to acquire considerable amount of land for developing low cost housing.

Land privatization

Most respondents have pointed land privatization as a solution to the land development problems in Windhoek. One responded alluded to this by saying,

“Land privatization is a key solution to land problems in Namibia. Land privatization has worked in other countries.”

Land privatization is also a form of land reform and it has been initiated in many transition countries such as Mongolia, to provide individual land ownership rights to citizens, in order to enhance the access to land and other land related benefits.

However, international organizations such as the World Bank, FAO, ADB, UN/ECE and USAID have implemented projects and published numerous papers to support land reform programme or land privatization in transition economies. In addition, many researchers and practitioners have analyzed negative and positive effects of land restitution in Central and Eastern Europe, and land distribution in CIC countries. More specifically, intensive economic oriented studies have analyzed rural land market development in many transition countries (Lerman 2003; Spoor 2003; Swinnen & Vranken 2005). Although, analysis of legal and institutional aspects of privatization in agriculture land is been investigated by many researchers (Rozelle & Swinnen 2000; Ho & Spoor 2006) land privatization has its problems as well.

Impacts of Land supply and Market forces

Most of the respondents recognized that some of the problems are caused by supply and demand issues. The demand for land in Windhoek is far much higher than the supply of land. So as a solution many participants have alluded to the fact that land supply must be increased in the urban areas in this case Windhoek. The market forces must be kept at a balance. One respondent alluded to this notion,

“The problem is the demand of land is too much and yet there is no supply of land. The government must make plans to take the nearby land and convert it to urban land”

In India, urban land-use controls and policies have a dramatic impact on land supply and price, and the explosive growth of the informal sector. India has had land-use planning controls since the 1950s. In the 1960s, policies were expanded and urban renewal schemes and public development authorities were established. In 1976, the Urban Land Ceiling Act was adopted in an effort to check speculation. As a World Bank report indicated: past urban land management strategies have not been overwhelmingly successful in meeting the more important objectives outlined by the 1965 Committee on Urban Land Policy: providing adequate quantities of urban land at reasonable prices and safeguarding the rights of the underprivileged (World Bank, 2000).

Adjustment of urban policies

Another important factor identified by the participants is that the city of Windhoek as the capital city it needs to be redesigned. Considering that the population is growing there is need for new planning and changes in urban policies. The respondents have identified this factor as a major solution to the problems of land development and servicing in Windhoek. This has been supported by many respondents, who alluded to that factor. One respondent said.

“The urban planning of Windhoek does not cater for the new population, therefore there is need for change in the urban policies and they must revisit their town planning.”

It is important for careful consideration of other countries and how they dealt with the problems of city planning and the changes they made in their policies in order to deal with the problems quite similar to the problems Namibia is facing. It is important to consider, Hong Kong, Botswana, Paris and Poland.

While there are striking differences between countries like Hong Kong and Botswana, their urban land-use policies are similar in that they are demand-oriented and accommodating. Their land development plans are based on short-term projections of land demands, attempting to accommodate future development, not to impede it. This orientation stands in sharp contrast to other rigidly planned and regulated cities. Warsaw and Paris cover about the same area, extending outward to 40 kilometres from the city centre, despite the fact that Paris has four times the population of Warsaw (10.3 versus 2.5 million persons, Bertaud, 1991).

This is the result of very high land-use planning standards rigidly applied, which keep densities low. Other factors account for Warsaw's pattern of low-density development as well: low infrastructure capacities including sewage treatment Capacity and a reliance on septic tanks, highly subsidized transportation, high air pollution, and low agricultural land values. In such cases, the way in which land development takes place will affect the costs of infrastructure systems such as transportation, water, and sanitation. More compact patterns of development can help economize on these capital expenditures. Another side effect of inefficient patterns of land development is the loss of farmland. This is a critical problem in the People's Republic of China.

4.9 Conclusion

The objective of the study was to investigate the determinants to effective and efficient land serving and development in Windhoek. There is no doubt that in Windhoek there is high demand of land because there is no land available. The empirical evidence from this chapter shows that land delivery system in Windhoek is faced with problems

that need to be addressed. A critical analysis in this chapter shows shortcomings in land development and service delivery in Windhoek. A critical analysis has identified the following determinants; land service delays, land policy and regulations, land modelling, and land supply.

Urban land policies and land modelling need to be addressed and the fundamental questions were what effective policies and what effective model is ideal for the city of Windhoek. The analysis was focused on the investigation of such determinants to the effective land delivery system in Windhoek. As far as meeting the objective of the study is concerned, this chapter focused on presenting that. An evaluation of different models and assessing the models based on the literature study was also done in this chapter in a bid to access and analyses the effective model suitable for the city of Windhoek.

CHAPTER 5

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The purpose of this study was to investigate the determinants of land development and servicing, service delivery in Windhoek. This chapter provides a summary of the findings of the empirical investigation and the conclusions drawn from those findings. It also contains recommendations that will help town planners, policy makers, land developers and all stakeholders on land issues to improve on their practices.

5.2 Summary of Findings

5.2.1 Causes of Land Servicing Delays and Land Shortages in Windhoek

The study identified that land service delays and land shortages has been brought about by a combination of factors. And these factors are:

- Finance
- Unavailability of serviceable land
- Municipal rigid procedures
- Unbalanced demand and supply

5.2.2 Finance Promotes Delays towards Effective Land Development

The study identified that most of the responses given by the respondents pointed to these factors as the major factors that promote delays in land development in

Windhoek. Finance in particular is one major problem identified by the majority of the participants. Financing and funding are separate issues. Financing is concerned with the provision of financial capital. Funding is concerned with servicing the capital. However, financing can influence the efficient delivery of infrastructure services when the two are effectively coupled. Given appropriate arrangements, efficient financing instruments can assist in the provision of an efficient roll out of infrastructure, with appropriate priorities met, and with neither leads nor lags in the process.

5.2.3 Demand and Supply has an Impact on Land Development and Land Service Delivery

The study has identified that there is an imbalance in the market forces, when it comes to land demand and supply in Windhoek. An adequate supply of urban land across the broad land use categories is important for social, economic and environmental reasons. By determining the amount and location of land available for different land uses, planning policies influence the location, size, and scale of business activities; and the type and cost of residential and dwellings. All jurisdictions use urban footprints or boundaries to define the overall quantity of land that is available for urban use. Inside the footprint or boundary, the jurisdictions employ zones and other development controls to regulate the use and development of land on a spatially defined basis.

5.2.4 Unavailability of Serviceable Land is an Obstacle in Land Development

The study identified that unavailability of serviceable land is a fact that is integrated and interrelated to all factors. Land shortages in Windhoek have been identified in this study as being related to all other factors.

5.2.5 Municipal Rigid Delays

The majority of the participants have pointed to the municipality as being rigid in their dealings with land issues. 82% of the respondents have pointed to that. The rigid procedures by the local authorities lead to further delays in a land development.

5.3 Recommendations

The following solutions to alternative land shortages have been identified in this study:

- Increased urban land use and supply
- Deregulation
- Policy adjustment

5.3.1 Increased Urban Used Control of Market Forces of Demand and Supply

The study identified that imbalances in land supply and demand in Windhoek is one major problem that need to be addressed. The demand of land in Windhoek has surpassed supply five times more, increasing the problem of land development and servicing in Windhoek. In markets where the prices are allowed to adjust in response to demand and supply the trend in price of land will reflect the underlying changes in the demand for and supply of land. If land is in short supply relative to demand, competition among consumers will bid up the market price. As the price rises, suppliers will seek to develop more land, or to utilize the existing supply to offer more blocks of the type that consumers are seeking and this has been the case in Windhoek at the moment.

The rise in price also means that the cost will exceed the budget constraints for some potential purchasers, dampening demand growth. In most markets, the price mechanism operates to close a shortage by both increasing the quantity supplied and decreasing the quantity demanded. If supply is unable to respond to rising demand, the impact on prices can be substantial. The impact on price is greater where a substantial share of potential purchasers are not highly sensitive to price. The supply of urban land for different land uses is not fixed – it is possible for new and existing land to be rezoned for a different use. However, because developable land is non-renewable, unique, and slow to produce and highly regulated, urban land supply tends to respond very slowly to changing market conditions in Windhoek.

5.3.2 Policy Adjustment

Land policy adjustment in Windhoek is necessary. This has been identified in this study, the need for strategy in dealing with land development issues is more practical and consulting with more stakeholders, partnership between private and public sector are some of the policies that were identified by the participants in the study. It is important for careful consideration of other countries and how they dealt with the problems of city planning and the changes they made in their policies in order to deal with the problems quite similar to the problems Namibia is facing. It is important to consider, Hong Kong, Botswana, Paris and Poland.

While there are striking differences between countries like Hong Kong and Botswana, their urban land-use policies are similar in that they are demand-oriented and accommodating. Their land development plans are based on short-term projections of

land demands, attempting to accommodate future development, not to impede it. This orientation stands in sharp contrast to other rigidly planned and regulated cities. Warsaw and Paris cover about the same area, extending outward to 40 kilometres from the city centre, despite the fact that Paris has four times the population of Warsaw (10.3 versus 2.5 million persons, Bertaud, 1991).

This is the result of very high land-use planning standards rigidly applied, which keep densities low. Other factors also account for Warsaw's pattern of low-density development as well: low infrastructure capacities including sewage treatment capacity and a reliance on septic tanks, highly subsidized transportation, high air pollution, and low agricultural land values. In such cases, the way in which land development takes place will affect the costs of infrastructure systems such as transportation, water, and sanitation. More compact patterns of development can help economize on these capital expenditures. Another side effect of inefficient patterns of land development is the loss of farmland. This is a critical problem in the People's Republic of China.

5.3.3 Deregulation

The regulations imposed by the local authority and the government wings like the NHL in Windhoek are either too stringent or rigid. These regulations have been identified as major weakness to effective land development in Windhoek. A careful and balanced deregulation of urban land policies and regulations can work to reduce land prices and increase land market efficiency. The first and most effective method for reducing the price effects of land-use and development controls is to bring land supply into balance with land demand. Residential subdivision standards should be assessed and revised to

lower land development and construction costs. Land-use and development controls should be simplified and the approval cycle shortened

5.3.4 The Need for Policy Adjustment and Alternative Models to Land Development Policies

The study has identified that there is need for policy adjustment and there is need for remodelling the land models in Windhoek. The majority of the participants have identified a combination of models to be used for effective land development to take place in Windhoek.

5.4 Alternative Land Development Models

Land development process works hand in hand with models in urban context. The study sought to investigate the determinants to effective and efficient land development in Windhoek. One of the objectives was to identify land development models suitable for Windhoek and also to evaluate the existing models in use. Gore & Nicholson (1991) gave groupings of modelling approaches. The sequential or descriptive models, the behavioural or decision –making models, the production based models and the structures of provision models. Early (1991) gave his grouping as, the event-sequence models, the equilibrium models and the structure models.

5.4.1 Structure Models as Alternative Models to Land Development in Windhoek

Government should acquire the majority land for housing development. The structure model asserts that a force should organize the development process .The study identified concerns by the majority on how land development is being hampered. The study identified that the structure model is best suitable for the Windhoek situation when

combined with other models. The proposition of the structure model is that relationship between land development and other factors like social issues and economic issues. The model also emphasizes partnership between government and private developers in land development.

5.4.2 Behavioral Model as an Alternative Model

The behavioural model emphasizes that actors, their roles, decisions, relations and interest take the central stage. It emphasizes the interaction between actors, in this case actors in land development. In this model the developer is seen as the main player and is related to other key actors, land owners, planners and all other stakeholders in land development. For land development to be effective and efficient, partnership should be created among the role players and this model has been identified to be suitable for effective land development and service delivery in Windhoek.

5.4.3 Sequential and Event –Sequence Model as an Alternative Land Development Model

This model simply describes the four phases of development which are evaluation, preparation, implementation and disposal. The development process begins when a parcel of land is considered suitable for a different or more intensive use and is completed when the necessary changes have taken place and land re-occupied. This model has been identified as one of the solutions to land development problems in Windhoek. The recommendation is that proper evaluation of land is done and the necessary steps taken until the land is developed.

5.4.4 The Production Model as an Alternative Land Development Model

Gore and Nicholson (1991) argue that the production based model build almost exclusively, their theoretical underpinnings on Marxist thoughts of production in capitalism. The models gives the emphasis on how the production of build environment is carried out, they are also grouped as the structure model and involves in public affairs, financial markets and other factors. This model combined with the structural model has been identified in the study as one effective model to land development.

5.5 Identified Guidelines for Reforming Urban Land Policies in Windhoek

Guidelines for policy reform were identified in the study though the responses given by the participants and most of them imply major political decisions and commitments on the part of governments, especially clear support for deregulation and privatization. The scope and depth of reform can vary. For example, at a modest level, land-use regulatory reforms can be initiated and targeted on master plans, subdivision controls, or permitting systems. A more ambitious reform program would be to restructure public land development agencies, breaking large authorities into small operations, and privatizing or liquidating some land development operations.

Depending on the focus and extent of reforms, either major or minor modifications will be required to enable legislation and statutes. Reforms may also necessitate fundamental changes in systems of property rights as well. Obviously, before strategies for major urban land policy reform can be developed, political and technical assessments are required. These guidelines are necessary for effective land development in Windhoek; these guidelines have been identified and summarized as follows:

5.5.1 The First Step to Reform: The Land Market Assessment

The essential problem with Windhoek is that urban land-use policies is too much government regulation and not enough government support of private-sector institutions. The first and obvious step is for the Namibian government to conduct an audit of their urban land policies. As described in another Urban Management Program paper, a tool known as the Land Market Assessment has been developed for this purpose.

5.5.2 The Second Step: Decentralize Land Management Authority

The issue of authority and rigidity of procedures has been pointed out by the participants in most of the research questions. There is need for decentralization of land management; it will be far easier to reform urban land policies if responsibilities for them are delegated to local governments. As a second step, national level assessments of the legal and institutional arrangements for urban land policy making and implementation should be undertaken. If power can be developed to local government, the reform initiatives outlined below can be more effectively pursued and better structured to fit local land market conditions.

5.5.3 The Third Step: Deregulate

A careful and balanced deregulation of urban land policies and regulations can work to reduce land prices and increase land market efficiency. The first and most effective method for reducing the price effects of land-use and development controls is to bring land supply into balance with land demand. Residential subdivision standards should be assessed and revised to lower land development and construction costs. Land-use and development controls should be simplified and the approval cycle shortened.

5.5.4 The Fourth Step: Curtail Public Land Development Agencies

There are too many agencies involved in land management in Windhoek. These agencies have increased the land problems. In many countries, public land development agencies do little to improve land market operations or to provide land and housing for the poor and quite often they pose a serious financial drain to governments. It is important for the Namibia government to critically assess the performance of these organizations and take corrective actions. Such actions might include restructuring very large parastatal organizations, privatizing all or part of these corporations, or liquidating them.

5.5.5 The Fifth Step: Improve Efficiency of Land Market Operations

Namibia is a mixed economy and market-based country where both customary and/or informal systems of land trading occur, the government should heavily invest in or promote private initiatives to provide a common titling and registration system to support land transactions. At a minimum, cadastral, subdivision, and parcel maps should be compiled, along with a system for recording real property transactions and updating ownership records. If property tax systems are to be used, additional mapped and transaction-based records are needed on property values, tax assessments, payments, and receipts.

5.6 Infrastructure Networks

Urban land policy needs to be linked with a sustainable program for infrastructure investment. Such a program requires that a basic spatial structure be prepared for each city, and that it be used to estimate the capital costs associated with providing the

necessary infrastructure to support development. The financial program must be sustainable; this means that, to the fullest extent possible, the users and beneficiaries of the system should pay for it.

5.7 Conclusions

The study focused on investigating the determinants of an effective and efficient land development system in Windhoek. The research questions focused on determining the problems of land delivery system, the policies set aside for land development and service delivery, the assessment of the land models towards determining its effectiveness and generally how Windhoek can deal with the problems related to land development. The study was successful in ironing out the problems that Windhoek is faced with in land development. In order to ascertain the effectiveness and efficiency of the current land programs, policies and model, the study had to iron out the effective and efficient strategies towards effective land development programmes.

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Appendices

QUESTIONAIRE

GROUP NUMBER-----

Thank you for your participation in this study.

1. Indicate your gender

Male	Female
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2. What is your employment status please explain?

3. What is your residential status in Windhoek? Please indicate by ticking where necessary

Criteria	Tick where Necessary	
Residential house owner		
Business land owner		
Plot owner		
On waiting list		
No resident status		
Total		

4. What period did your took to acquire your residential property? Indicate in the space provided.

5. The following table has different financial categories please indicate which category where you belong. Tick in the category of your choice.

Criteria	Financial status of participant /income of participants per annum							
	Less than N\$60 000		Above N\$ 60 000 – N\$100000		N\$100000 – N\$120000		Above N\$120000	
	tick		tick		tick		tick	
Residential house owner								
Plot owner								
On waiting list								
No resident status								

6. What are your opinions on land service delays in Windhoek? Indicate in the table below. Tick where appropriate.

Delays in Land Service Delivery

Criteria	Strongly Agree		Agree		Neutral		Strongly Disagree		Disagree		No response	
	tick		tick		tick		tick		tick		tick	
Finance												
Unavailability of serviceable land												
Municipal rigid and delays												
Poor registration records												
Land use controls												
Unbalanced demand and supply forces												
Poor land policies												

7. The following are possible causes land shortages in Windhoek. Indicate your rating of each cause in the category that you consider your choice.

Land shortages in Windhoek

CAUSES OF SERVICED LAND SHORTAGE IN WINDHOEK										
CAUSE CATEGORY	Response									
	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	tick		tick		tick		tick		tick	
(A) Lack of Financial capacity by the city of Windhoek										
(B) Rapid rural urban migration										
(C) Cumbersome and slow land transactions										
(D) Distortions and Speculation on the land markets/market forces										
(E) Poor land policies										
(F) Lack of serviceable land										
(G) Lack of other necessary resources such as water										

8. The following are possible solutions effective land development. How best do you rate them indicate by ticking where necessary.

Solutions to Land Development

SOLUTIONS TO LAND DEVELOPMENT PROBLEMS IN WINDHOEK										
SOLUTIONS CATEGORY	NUMBER OF POINTS:									
	5		4		3		2		1	
	tick		tick		tick		tick		tick	
(A) Privatization of Land servicing										
(B) Public Private Partnerships										
(C) Increase in Public sector allocations for land servicing										
(D) Simplifying land transfer procedures										
(E) Investment in support services-water and waste collection										
(F) Deregulation										
(G) Increasing urban use supply										
(H) Converting rural land to urban										
(I) Simplified land use development controls										
(K) Land supply and demand balance										

9. The following are land development models .how best do you rate them as alternative models to land development in Windhoek.

Alternative land development models

Category	Agree		Neutral		Disagree		
	tick		tick		tick		
(Alternative models)							
Government acquiring majority land for housing and development (Structure model)							
Partnership between government and private developers (Structure model)							
Deregulation (Structural and behavioral)							
Rural land acquired for urban development (Sequential and structural model)							
Policy adjustment (Behavioral and structural)							
Increase supply of land (Production model)							
Adjustments of concession terms and land tenure policies (Structural model)							

Source :(primary data)

10.What policy adjustment is necessary to effective land development and servicing in Windhoek? Indicate below which is your response?

Category	Agree		Undecided		Disagree	
	tick		tick		tick	
Privatization of land						
Introducing housing subsidy						
Security of land tenure						
Change the regulatory environment						
Increase urban land supply						
Adjust national development plans						
Adjust the national development act						
the national housing enterprise(NHE) need adjustment						
Integration of housing & service infrastructure						

CONSENT FORM

RESEARCH CONDUCTED BY: Hendrick Amadila

I.....agree to participate in the questionnaire of this study on the basis that I volunteered for the study and that I have the right to freely withdraw from the of this study at any time and have the right not to answer questions about which I feel uncomfortable without penalty, risk and loss.

The researcher has explained to me in comprehensive terms the nature and purpose of the study and how the data results) will be used.

I will remain anonymous in the study and the raw data from interviews will remain confidential. The researcher promised to use “pseudonyms” in the report or thesis. The research or information obtained will not be used to disadvantage me. There are no other persons other than the researcher and myself who will have access to the raw data.

.....

Signature of participant

.....

Date: Consent Form completed

(For Researcher’s use only) Witness..... Date.....

Signature Date.....