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The Effectiveness of Private-Public Partnerships in Land Delivery for Low-Income Housing Development for the City of Windhoek Namibia

Bernardus Franco Maseke [1], Esther Kachana Liseli[2]

[1] Senior lecturer University of Namibia;
[2] University of Namibia

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ABSTRACT

Purpose: This study sought to assess the effectiveness of the City of Windhoek Public Private Partnership model for land delivery and low-income housing initiatives. To gain in-depth knowledge and understanding of the topic, the research adopted a mixed method approach.

Methodology: A sample size of 80 respondents was statically determined and randomly selected from a target population of 120 employees and beneficiaries of PPPs using probability sampling.

Findings: The study findings revealed that the City of Windhoek's PPPs model and housing initiatives for low-income earners fell-short in meeting its objectives against the ever widening housing shortage, notably due to bureaucratic statutory approval processes, a lack and high cost of serviced land as well as high material costs.

To date, only a handful of those from the grassroots have benefited. The drawn conclusions were that, although the Triple-P model and housing initiatives was adopted to bridge the ever-widening gap of housing shortage, the houses being built are not affordable to low-income earners. Henceforth, the study recommends that government should provide extended support to the grassroots groups, case in point through subsidized grants or arranged part-payments at financial institutions whereby government could cover part of home-loan costs. Finally, effective program execution, monitoring, feedback and evaluation of the project milestones should be enhanced.

Originality/Value: In this study we attempted to the effectiveness of private-public partnerships in land delivery for low-Income housing development for the city of Windhoek Namibia.

[1] Corresponding Author: fmaseke@gmail.com
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1. Introduction

In most developing countries like Namibia, the demand for housing has been exacerbated by high influx of people from rural to urban areas. During the period between 2011 and 2016, the population in Windhoek increased from 325 858 to 384 191 and it is estimated that by the year 2040, the population will have doubled in size growing to approximately 840 000 [1]. The survey carried out is a clear indication of the prevailing influx of people from rural areas to the city in search of what is deemed a better life. As more and more people migrate from rural areas to the cities, the rapid increase in urban population presses the demand for urban housing. Time and again, the continuous influx of people into urban areas has had an upturn knock-on effect on the number of people listed on the urban housing waiting list programs. Given that most people migrating to the City of Windhoek are the less affluent, the demand for affordable housing is further augmented by the mushrooming informal settlements [2].

Government has traditionally managed the provision of urban land and housing in Namibia, but in recent times, a wide demand supply gap in urban housing has made this practice difficult [3, 4]. In the City of Windhoek, the supply of low-cost housing has turned out to be a more complex task [5]. To mitigate this difficulty, the City of Windhoek along with other local authorities in Namibia have adopted partnering with the private sector and government in order to form what is generally known as the Public-Private Partnerships (PPPs) [6, 7]. The adoption of the Triple-P-model in urban housing supply is seen to offers greater value for money in the development and supply of low-cost housing, in comparison to other traditional procurement systems [8]. As pinioned by Chitongo [9] to improve the provision of low-cost housing, the government should proactively engage the private sector. Haipinge [10] conducted a study to investigate strategies that the Namibian government could apply in the provision of low-income housing to families, to that end, the effectiveness of the PPP-model in the context of low-cost housing in Namibia has not been explored. Studies assessing the role of the Triple-P model in the provision of low-cost housing carried out in Nigeria by Ibem [11] and in Egypt by Abd-Elkawy [12] have shown successful outcomes in low-cost housing provision. It is against this background that this study endeavored to assess the effectiveness of the City of Windhoek's Public Private Partnership for land delivery and low-income housing initiatives.

2. Literature Review

2.1. The Concept of Public Private Partnerships

Public Private Partnership (PPPs) is a joint undertaking that increase capacities through innovation, efficiency and technical knowledge [13, 14]. The triple-P concept has also been discussed by Ibem [10] as a collective effort between public, private and third sector organizations established on a common goal, division of labour and a relative advantage in the sharing of responsibilities, risks and benefits. In terms of land development for housing provision, PPPs are viewed as a framework through which the government together with the private sector unite to provide solutions to sustainable housing [15]. Other studies discuss PPPs to entail the provision of infrastructure assets and services by the private sector that would typically be provided by the government [16]. In summary, aligning various instruments that include expertise and capital resources as a collective through the PPPs approach has the potential to broaden access to affordable land and housing while meeting stakeholders' economic expectations [17].

During the year 2009 and 2010, the Government of Namibian initiated a PPPs consultative scoping study, which resulted in a policy that eventually shaped the design of Namibia's PPPs legislation [18] which become operational in 2018. The government's adopted PPP approach in terms of housing

development include a partnership where the private and public sectors jointly finance, own and operate housing projects amongst others and share the risks based on the provisions of the contract. Under the PPPs model the public sector is the major contributor of project funds and this allows the public authorities to have control over the planning and development stages while at the same time making use of the resources and expertise in terms of construction and design that the private sector has to offer [18]. The City of Windhoek (2017/18) report [19] shows that prospects of engaging the private sector in land servicing by the City of Windhoek were first conceived in 2011 as part of the City of Windhoek's strategies to hasten the process through efficient delivery of land. However, the model was found lacking in terms of tasks, execution, duration and contribution made by partners in addition to a lack of clear guidelines during project implementation.

2.2. Land Delivery for Housing Development

The growth of urban land demand in developing countries is associated with urban population explosion and globalization of investments. In the next 25 years, it is estimated that over 2 billion people in urban centers will be in need of housing [20, 21]. Even through this experience is worldwide; developing countries are hardly hit by the demand for urban land. The expansion of Windhoek as an urban center has resulted in the shortage of land supply in the city. Countries like Burkina Faso, Tanzania, Kenya, Ethiopia, Sierra Leone and Somalia to mention a few has for example experienced limited access to land and inadequate housing, resulting in the formation of squatter settlements [22, 23]. There are a series of processes involved in the delivery of housing of which resources such as land, labour, finance and building materials are needed in the production of housing. Land is a crucial input for housing, thus making it impossible to separate access to land and access to housing in urban areas [24]. Processes, activities, policies and variables such as technical, legal and administrative capabilities form part of both the delivery and accessing of urban land. The delivery of urban land requires the availability of policies which make and titles land, formation of rights and distribution of the land for different uses as needed [25]. Available statistical evidence has shown that the performance of the formal channels of land delivery in Windhoek has been inadequate. For example, the supply of land in relation to applications received or demand is significantly low [26]. With the growing number of urban population and an increase in land demand, the level of land delivery clearly indicates a case of inefficiency. Kuma [25] asserted that un-procedural land delivery systems are a response to the inability of the formal land delivery systems to make land available to the people. The shortage of serviced land significantly impacts on the house price and presumably presents a barrier on the delivery of housing [27, 28].

Efficient implementation of land policy has to do with institutional arrangements such as the organization framework of land administration, enforcement of land laws and the allocation and monitoring of land mandates in the public sector [25]. Hence institutional arrangement is meant to be built on sound legal, administrative and technical frameworks. Institutional framework governing land policy administration has been rendered inefficient and cumbersome [24, 29].

2.3. City of Windhoek's Low-Income Housing Initiatives

In Namibia the adoption of PPP's by City of Windhoek in the provision of low-income housing is still emerging. To diminish the housing shortage particularly among low-income segment, the City of Windhoek adopted a Beneficiary Housing Project which consist of two components, namely; Build Together Housing Scheme and Windhoek Housing Scheme. The Build Together Housing Scheme was previously administered by the Ministry of Urban and Rural Development. In 2000, the function of the Build Together Housing Scheme was decentralized to local authorities such as the City of Windhoek

amongst others. The Department of Human Settlement and Property Management is responsible for the management and administration of the Housing Schemes on behalf of the ministry. Through the housing scheme, the Ministry of Urban and Rural Development avails funds for the purpose of building low cost housing for low-income citizens. The beneficiaries were given a loan amount between N$20 000-N$80 000 to erect dwellings. Both individuals and those who belong to other housing groups can benefit from the scheme. To reduce dependency for housing finance from central government and to sustain the program over a long period, a revolving fund was established at both regional and local government. The Shack Dweller Federation (SDF) and private groups form part of the Build Together Housing Scheme. The SDF pre-finance all groups that are affiliated with them and claim back their money from Council through the Division of Property Management upon completion of the houses. While the private groups apply's for loans directly to the City of Windhoek under the regulation of their group committees whereby progress payments are made to individuals and the suppliers of building materials. In 2012, Council took a moratorium on the disbursement of the Build Together Housing Scheme loans for the period 2011-2013 and no approvals for the loans were made for that period [30]. The Windhoek Housing Scheme is a housing initiative created by the City of Windhoek to grant loans for low-income people to erect low-cost houses or make extensions to existing dwellings. Unlike the Build Together Housing Scheme, the Windhoek Housing Scheme only accommodates individuals who owns land but do not have money to build. Equally the same moratorium placed on the Build Together Housing Scheme was imposed on the Windhoek Housing Scheme in 2016. Hence, no housing loans were approved after the moratorium.

The moratorium on both the beneficiary housing projects schemes was taken because the projects were not managed properly hence, there was no proper records kept on the management of funds, reconciliation and detailed risk assessment existed on the business process for the schemes as well cases of fraud being reported. It was estimated that 90% of the debt was outstanding on the capital account for the two schemes. Where else approximately, a total debt of 10% on the installment account for the two schemes was also outstanding. Therefore, looking at the figures, it can be concluded that the two schemes were poorly managed hence not meeting the objectives they were created for. And for this reason, the City of Windhoek has diverted its focus on the piloting of an Affordable Housing Public Private Partnership through the Ministry of Finance, a project which is currently its initial phase [30].

various governments in developing countries of which Namibia is not an exception lack consistency and continuity in government policies and programs and this is believed to have a detrimental effect on housing policies because of the fact that every new government administration introduces new policies and programs without looking at what had done or left behind by previous administration [31]. Thus, Consistency and continuity in housing programs could be an element for sustainable land development for housing provision. The formulation and implementation of the policies and programs have never considered the participation of the people. As a result, decision makers have not rightly had the poor people and yet they still don't have influence on decisions that affect their lives.

2.4. Challenges Affecting the Implementation of Public-Private Partnerships

The City of Windhoek as a local authority has the responsibility of acquiring, servicing, allocation and administration of land in urban areas. The servicing and delivery of land by municipalities of which the City of Windhoek is not an exception is challenged by inadequate financial resources. Local authorities in Namibia largely depend on central government for development budget. However, the budget

allocation to housing development has been deemed to be far below international figures and unsustainable [32].

To combat the problem associated with land delivery and the need to provide affordable housing for residents in Windhoek and other parts of the country, the Namibian government has intervened in the housing sector through various policies, programs and reform aimed at achieving the objectives of providing affordable housing for the citizens [6, 33]. Various forms of government intervention include housing development schemes such as Build Together Program (BTP), and the National Housing Enterprise as well as non-governmental organizations such as the Shack Dwellers Federation of Namibia (SFDN) actively render support in the housing development programs [34]. Additionally, government had responded to the housing problems through policies such as the National Development Plans 4/5, Blueprint on Mass Housing Development Initiative and municipal/town council housing schemes to increase the construction of houses and supply of serviced land. Policies such as Vision 2030, which is a long-term framework for national development aimed at ensuring that low-income people have access to housing and TIPEEG which put more emphasizes on creating job opportunities, and housing, has been equally adopted [10].

However, studies have shown that the past land and housing delivery strategies and policies have not successfully addressed the housing needs of low-income people in Windhoek who constitute more than 40 percent of the Namibian population in urban areas [35]. Findings from other studies suggest that the failures in housing programs and partnerships are mainly associated with inappropriate strategies, political and mismanagement of resources, lack of proper organization and high cost of housing [36, 37]. The application of PPPs in urban sector by governments around the world has tried to meet the needs of the growing population that is accompanied by a range of challenges [38]. Depending on the country's level of understanding and development in the application of PPPs models, the scale and scope of the changes also differs. Often times, the goals of the private sector tend to differ from those of the public sector in the sense that the private sector may focus more on economic gain while the public sector strive to protect the interest of the people through regulations [39]. The alignment of government goals and maintaining a healthy level of trust is usually difficult to achieve and maintain throughout the project. This is experienced mostly when dealing with subsidized urban projects where government has to additionally and continuously provide funds required for delivering basic services to the most affected population in the country. In such case, it becomes difficult for the private sector to achieve a reasonable margin of profit and goals become more difficult to attain [40].

The continuous increase of population in urban areas put more pressure on the local governments to adopt new partnership financing models and urban planning strategies in order to meet the growing housing demand [2]. However, many local authorities of which the City of Windhoek is not an exception lack basic negotiation, finance, contract and other skills required to take charge of intensive urban projects such as PPPs. Thus, assuming the role of service provision becomes more difficult [36]. This is particularly true in countries like Namibia where most local governments are emerging and expect changes in terms of existing or absent basic laws and regulations required to conduct business with the private sector [8].

As a result of risks associated with PPPs projects, majority of the benefits linked to the model are rarely achieved. Like any other project PPPs are equally exposed to numerous risks and each PPP arrangement present different form of risks such as financial risks, technical/design risk, political risks, economic risks and legal/regulatory risks [41]. Additionally, the challenge with the private sector is that it is

difficult to produce affordable housing for low-income-middle income households with being subsidized by the government. This is also experienced even in the construction of modest housing units whereby the break-even rents seem to be higher than what is regarded to be affordable for many low-income households [42]. Findings from various studies have shown that housing authorities lack financial capacity and resources to develop land for production of low-cost housing on their own [5]. Therefore, this is evident that the construction of affordable housing will require partnership by both private and public sectors [43]. Due to regulatory failures and lack of consensus, in Namibia, land delivery and housing projects takes at least twice as much time to be completed and these projects are more costly [6]. As experienced by the City of Windhoek, the failure of most attempts at national housing reform and the increase in financial pressure has resulted in an increased interest on the PPPs as probable initiatives to respond to housing needs [44].

Income level and availability of finance have significantly contributed to accessing urban land. Hence, findings from a study done by Koroso [24], indicates that access to land in urban areas is hindered by socio-economic status such as level of education, occupation status, household sizes and level of income. Lack of access to land is a major obstacle hindering the poor in urban areas from meaningfully contributing to the urban economy. Additionally, lack of access to land plays a role in the hindrance of prospect developers to appropriately respond to housing demand. The resulting pressure from globalization, urbanization and a fast-growing population has caused chaos on land delivery and development of housing in Windhoek. The daunting task is that land should be delivered adequately and at an affordable price. However, balancing demand with supply has not been an easy task for the City of Windhoek. Equally, affordability has a major role to play in the housing supply; the cost of housing is far too expensive in comparison to income. A vast number of people in Windhoek live in informal settlements because they are unable to acquire appropriate housing at affordable prices. This problem is mostly persistent among the low-income households who happen to be the most vulnerable group. the unbalanced income distribution associated with growth and financial constraints makes it difficult to deal with deal with housing needs in most developing countries including Namibia, which is characterized by high income inequality whereby 89% of households have a monthly income below N$ 5,000 and 7% have a monthly income between N$ 5,000 and 10,000 [45]. Additionally, location of land has an important role to play in terms of land suitability for residential purposes. It includes attributes such as topography, access to infrastructure and quality. Therefore, the sustainability of housing requires a sound environment area. In Windhoek variables such as topography, soil condition, and vegetation greatly influence land affordability due to costs involved in the preparation and development of the land. Hence, high income earners dominate the land markets in good locations while the poor are left to occupy the less desirable areas with most environmental and infrastructure problems.

Partnerships have their own challenges; however, if the City of Windhoek is unable to deliver affordable houses needed by majority of the residents with the available resources, there may be a need to review the function undertaken by the organization. New organizational measures and unwavering commitment from both the private and public sector is required in order to address these challenges and take advantage of the opportunities they present [46]. Moreover, the success of PPPs could be achieved by creating an enabling environment that includes; political stability, enforcement of a legal framework and increased transparency, monitoring and foreign investment coupled with strong institutional arrangement free from undue political interference [47]. However, the limitation of capacity in the appraisal and implementation of PPPs usually result in incomplete project preparation, inadequate financial models and business plans as well as lack of experience in the development of high-quality

concession contracts and monitoring of operational success [48]. Hence the City of Windhoek needs to do more to address such weaknesses and facilitate effectiveness in the development of PPPs.

3. Methodology

The choice of research design provides a reflection of the decisions about the priority given to a range of dimensions of the research process (Creswell, 2012). The mixed-method approach was used to combine both qualitative and quantitative research method that employed a concurrent triangulation research design. The researcher collected both quantitative and qualitative data at the same time and then integrates the information in the interpretation of the overall results. The Quantitative research method was used to collect data that quantifies the data into quantities for easy interpretation. This enabled the measurement of data from the sample quantitatively. To unlock and better understand the connection between the variables assessed on the effectiveness of PPPs models in land delivery for development of low-income housing, the quantitative approach was relevant. While at the same time, the qualitative method allowed the researcher to discover respondent's perceptions and thoughts about the research problem [49]. A combination of the two methods gave a greater prominence to the strength of the data collection process and analyses

As articulated by other researchers, in research population is the universe from which a sample is to be selected [50, 51]. The population of the study was 120, this included; employees from City of Windhoek, Ministry of Urban and Rural Development and beneficiaries of PPP in Otjomuise Extension 4. The organizations were conveniently chosen among others because they work directly with issues related to housing. Data obtained from City of Windhoek revealed that residents in Otjomuise Extension 4 benefited from a PPP project for land delivery. During research, different methods of sampling techniques are used to collect data, hence the study used a probability sampling method. Being a mixed method research, the study employed a simple random sampling technique, whereby a sample of 80 respondents was randomly selected from the population. Saunders and Thornhill [52] table provided a guide to different sample sizes required, at a 95% confidence level for a 5% margin of error and a maximum variability of 50% (0.5). To ensure a balance of views, participants were selected randomly including those in managerial and non-managerial positions as well as beneficiaries of PPP. From a sample size of 80 respondents, feedback from 69 respondents were obtained. The researcher believed that the response rate was sufficient for the study because it reflected the characteristics of the population and it contained a range of participants with different skills and backgrounds.

Research Instruments

To ensure validity and reliability, the researcher used different instruments to collect data and obtain information from different sources. The instruments used in the research include an open and closed ended questionnaire and semi-structured interview guide. The development of the questionnaires was guided by the research objectives and literature review. The validity and reliability of a measuring instrument depends on the consistency of the instrument and what it intends to measure [53, 54]. Primary data was collected using an open and closed-ended questionnaire, self-administered to respondents. To validate the participants' responses, the research adopted a five (5) point-level rating scale/Likert scale. Ambiguity in the questions was eliminated by carefully developing questionnaires. Semi-structured interview guide, data on respondents' opinions and perceptions on the effectiveness of Private Public Partnership models were obtained and respondent's answers matched and verified. Interview questions were formulated in a clear and concise manner to ensure understandability by respondents. The interview guide made it easy for consistency and ensuring that every informant replied

to the same questions. Thus, eliminating chances of being bias since the interviews are conducted under standardized conditions, thus making it easy for the data to be easily comparable [55, 56]. To ensure that views expressed during the interview were correctly captured and can be reviewed at a later stage, the researcher made use of a tape-recorder to record the proceeding of the interviews.

Additionally, secondary data was collected using both published and unpublished data sources to enrich the study. To test the quality of the interview guide, questionnaire and to identify potential biases, the researcher performed 'dry or dummy runs' with colleagues as a form of piloting the interview schedule and questionnaire. The testing helped the researcher to improve questions, format, and consistency. The different methods of information acquisition supplemented each other by enhancing and validating the dependability of the data collected. After developing the survey instruments, a pilot study was conducted on employees, to ensure that questions were clear and concise, as well as adjusting the questionnaires and the interview guide. Moving forward, the research wrote a letter to the institutions (City of Windhoek, Ministry of Urban and Rural Development), requesting for permission to conduct research. Additionally, appointments were made with respondents in advance for administering and collection of the questionnaires in order to give respondents and the researcher ample time to prepare for interviews and completion of the questionnaires. Questionnaires were self-administered, and explanations were made on issues that respondents could not understand or needed clarification. Since the study employed a mixed method approach, both qualitative and quantitative data analysis tools were used. The data derived from the questionnaires were coded and computerized using Microsoft Excel before exporting it to a Statistical Package for the Social Sciences (SPSS) for statistical analysis. The data derived from interviews was transcribed and then coded using the Atlas software to generate themes whereby thematic analyses were done.

4. Findings

4.1. Demographic characteristics of the beneficiaries of a PPP in Otjomuise Extension 4

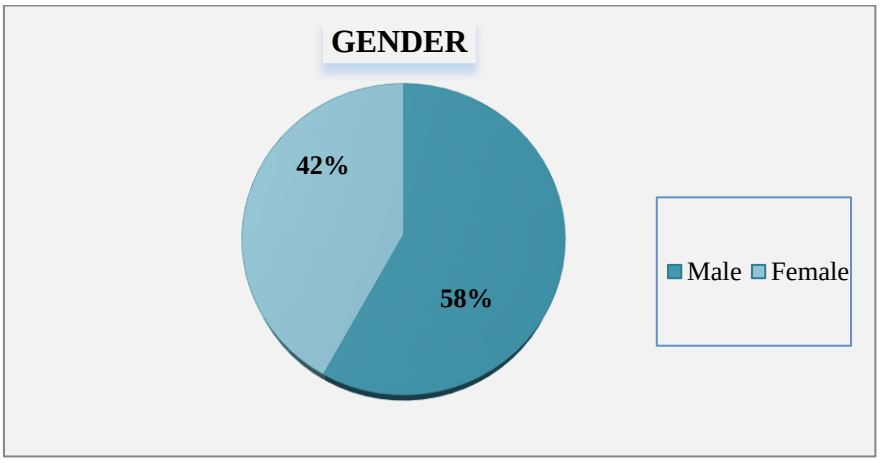

Figure 1. Beneficiary's gender demography

From the survey, it appeared that 58 percent of the respondents who were sampled as beneficiaries of the PPP's for land delivery project in Otjomuise Extension 4 were male while 42 percent were female. The percentage of males outnumbered the percentage of females forming most of the sample. This is a

sign that male-headed households are still dominant. However, it should not be concluded that there is segregation of gender in the purchasing of housing. Since stands are being sold out to any person eligible to purchase the land. But rather a confirmation to the Namibian Labour Survey conducted by the Namibia Labour Force Survey [1] which states that women constitute a slightly high amount of unemployment in urban areas with 49.1% in comparison to men at 50.9% respectively. The survey also indicates that the Khomas region has the highest number of inactive population females, accounting for 16.3% out of the 56.5% of the female inactive population in the country.

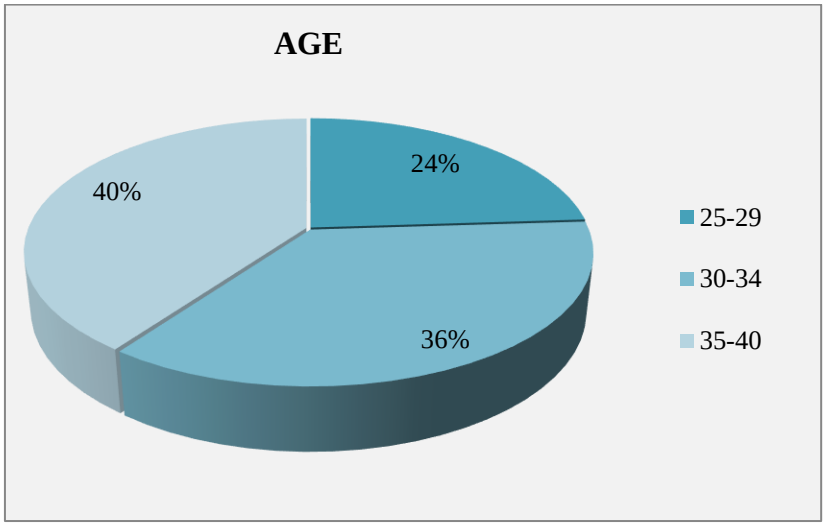

Figure 2. Beneficiary's age

It emerged that out of the total sample, the majority of the beneficiaries' fell in the age group 35-40 years with 40 percent dominance, followed by the age group 30-34 with 36 percent, while the age group 25-29 had 24 percent respectively. The age group above 40 is not represented, simply because the conditions of the sales were that no persons above 40 years were eligible to apply. These findings clearly show that people under the age of 25 have little chance of acquiring land because the majority of those who benefited from the project were above the age of 25, which could be attributed to the fact that they are still in university or still looking for jobs thus rely on their parents. Furthermore, evidence from the National Planning Commission's [57] report on the Namibian economy suggests that a sizable proportion of the youth, 43.4%, is unemployed.

Figure 3. Beneficiary's employment status

As shown in figure (3), findings from the study indicate that 63 percent of the respondents are employed while the remaining 35 are unemployed. Those that are self-employed were asked to indicate how they are able to commit to the monthly payments of the loan. The respondents that are self-employed mentioned that their source of income comes from economic activities such as short-term employment, private consultancy and other forms of employment. Only 2 percent of the respondents were unemployed and indicated that their funds came from previous employment/pension. This implies that only those with a stable income can afford and are able to participate in the sale of land. The exclusion of most of the population who are reported to be unemployed and without stable income from participating in land sales is evident in the results of the study. A percentage of the self-employed is a representation of the reports that SMEs account for 20% of the employment ratio in the country with a contribution of about 12% to the Gross Domestic Product (GDP) [58].

4.2. To what extent has the shortage of serviced land impacted the housing market?

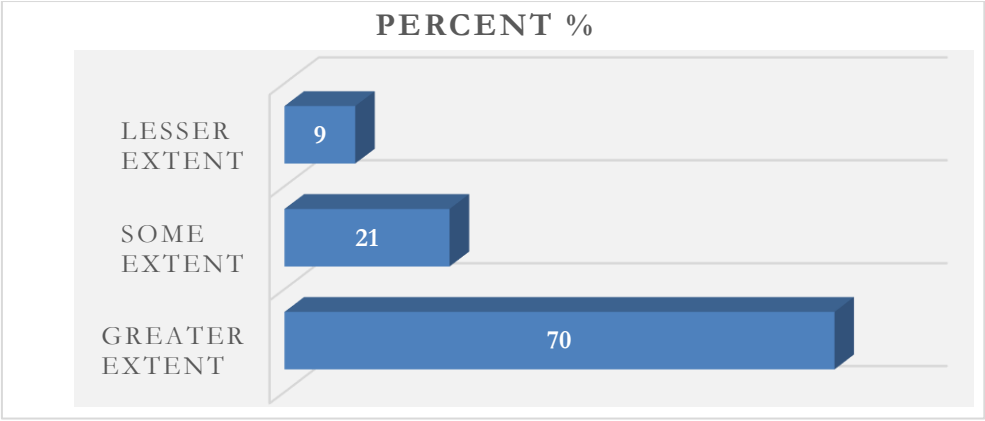

Figure 4. Shortage of serviced land impact

Around 70% of the participants agreed that the shortage of serviced land has a greater impact on the housing market because there is an increasing number of people on the waiting list. Hence, this has

played a role in challenging the City of Windhoek to deliver land to the citizens in the low-income areas. However, 21% of respondents agreed that a lack of serviced land has contributed to the housing shortage to some extent, while 9% of participants agreed that a lack of serviced land has contributed to the housing shortage to a lesser extent. When asked to explain, respondents mentioned that the supply of housing units has lagged and is unresponsive to the demand, hence the housing gap is visible in the higher price of houses on the market. Additionally, the growth in demand for housing has influenced the average house price by increasing at a higher rate, thus making houses unaffordable, especially for low-income earners.

Another respondent mentioned that the housing shortage is also an indication that there is a shortfall in the delivery of land. Moreover, respondents mentioned that although there are other factors affecting housing supply, the supply of serviced land is more prominent. For example, Mwilima et al., [3] mentioned that the limited supply of serviced land is evident that local authorities take a long time to award an application of land to an applicant. Furthermore, some respondents believed that the City of Windhoek lacked resources to expedite land servicing because it is very expensive to service land in Windhoek due to the challenging terrain with a mountainous landscape. As a result, the cost of serving land feeds into the high prices associated with land sales. This is in line with findings of a study done by Kuma [25] that sustainability of housing requires a sound environment with proper land suitability for residential development. Furthermore, respondents explained that private developers that are involved in the serving of land need to recover the cost of serving and profit by increasing the prices at which such land is sold. At the end of the day, the end users are the ones feeling the pinch, thus the lowest income earners are unable to put up a deposit to buy or commit to the obligation of long-term payment. Hence a need for affordable housing initiatives that are fully subsidized and of long-term implementation with product differentiation among sub-markets. Looking at the response from respondents, it is evident that land servicing plays a vital role when it comes to housing delivery and balancing of both land and housing transactions. Thus, more investments are needed in order to expedite the process.

4.3. Do you think the organization has adequate knowledge to deal with PPPs?

Table 1. Assessment of PPPs knowledge

Perception	Frequency	Percentage	Cumulative Percent
No Knowledge	11	30	30
Slightly Knowledgeable	15	41	71
Quite Knowledgeable	7	19	90
Very Knowledgeable	4	10	100
Total	37	100	

Stakeholders' knowledge of PPPs for land delivery was carried out through questionnaire and interview surveys. The perception of officials was based on a rating scale of 1-5, where 1 and 5 represented 'no knowledge and highly knowledgeable' accordingly. Table (1) presents the results of the quantitative evaluation. A semi-structured interview in the form of a conversation on respondents' perception of the organization's knowledge of dealing with PPPs was done with 2 (two) officials from the City of Windhoek and 1 (one) official from the Ministry of Urban and Rural Development. The results from the survey shows that about 41% of respondents were slightly knowledgeable, while 30% had no knowledge, 19% indicated that they were quite knowledgeable, whereas 10% were very knowledgeable.

The percentage of respondents who indicated to be highly knowledgeable about PPPs was very low and this could be related to the fact that the concept is new and has not been practiced extensively in housing and land delivery projects. The results of the interview survey pointed out that successful implementation of PPPs projects has not been fully attained because policy guidelines that regulate the implementation of PPPs are usually overlooked and not conformed to during project implementation, hence poor results. Second, a lack of collaborative effort among stakeholders involved in PPPs projects is critical to the effective execution of the projects; thus, a lack of focus has resulted in ineffective PPPs implementation in land delivery.

One of the respondents was quoted narrating that "lack of knowledge in PPPs among staff members has financially impacted the organization's land delivery process and a good example is the mass housing project where there was no strong contractual partnership and inappropriate tendering process which led to the increase of construction costs resulting in high prices of the houses. Hence, the scheme failed to fulfill its goal of constructing affordable houses for citizens". Overall, respondents did not rule out the possibility that PPPs, if properly implemented, could have a positive impact on the land shortage, despite evidence that the concept has not been satisfactory.

The study findings are in accordance with the research done by Abdul-Aziz and Kassim [59] whereby it was stated that "the public agencies' negotiation skills and adequacy of negotiation staff have an effect on the delivery of housing projects and are equally inter-related". Hence, the implication of inadequate PPPs skills and knowledge is that it leads to poor planning and application. This reinforces the consensus among the respondents in the higher ranking of respondents being slightly knowledgeable about the PPPs concept. This is evidence in the study done by Mathonsi [47] pointing out that a partnership framework with clear definition of both public and private partners' obligations and liabilities and appropriate administrative structures is critical for the successful implementation of PPP.

4.4. Do you think PPPs for land delivery projects in low-income areas has been effective?

Table 2. Public Private Partnership projects for land delivery

#	Project Area	Amount of land Allocated in ha	Number of Plots	Residential Plots	Year
1	Academia Extension 1 &2	56.51	477	458	2011
2	Otjomuise Extension 4	49.30	206	199	2011
3	Erf 2317, Otjomuise (Co-Development)	11.94	477	477	2011
4	Otjomuise Extension 5	11.23	367	362	2013
5	Khomasdal Extension 4	1.96	27	27	2017
6	Otjomuise Extension 12	12.40	102	83	2017
7	Rocky Crest Extension 4	45	286	250	2017
8	Rocky Crest Extension 5	43	303	275	2017
9	Rocky Crest Extension 6	25	279	260	2017
10	Auasblick Ext 1	57.23	284	270	2017
11	Klein Windhoek Extension 4	88.50	165	171	2017
12	Kleine Kuppe Extension 1 (Phase 2B)	20.42	98	102	2017
Total	422.49 ha	3071	2934		

To gather the opinions of respondents on the number of projects on land delivery in the low-income areas and the effectiveness of the PPPs for land delivery projects in low-income areas and gain more

insight into the matter, the two questions were posed through a questionnaire and interview guide as they complement each other. Using the information obtained from the survey, Table (2) was constructed and it gives a summary of the land delivery projects by the City of Windhoek through PPPs.

During the survey, it was revealed that between 2011 and 2017, the City of Windhoek partnered with 12 private investors who were allocated land for servicing. Such PPPs are listed in the table above. It is the responsibility of the City of Windhoek as a local authority to provide services, including land, in accordance with the Local Authority Act of 1992. Thus, it entered partnerships in order to provide serviced land through private investors. The respondent mentioned that Otjomuise Extension 4 was the initial PPP implemented followed by Academia extension 1 & 2 whereby the two PPPs were done by the same developer. However, the PPPs were regarded as pilot projects to determine the viability of PPPs as a method of accelerating the delivery of serviced land. Regardless of that, before finalization of the pilot projects, the City Council entered into PPP agreements for Otjomuise Extension 5 and further signed agreements for nine (9) more PPPs. The study observed that most of the projects were not completed within the assigned time frame. Although most of the agreements were only signed in March-June 2017, the proposals were initially presented to the Council as early as 2012/13. The initial agreements for the pilot projects in Otjomuise Extension 4 and Academia extension 1 and 2 were signed in 2011.Officials from the City of Windhoek noted that due to delays associated with financial implications, the projects could not be completed on time.

Respondents were of the opinion that based on the number of resident residents in need of housing, an inference can be drawn that the City of Windhoek's Public Private Partnership has not successfully contributed to land delivery, particularly in low-income areas, and it is clear from the project location that the major beneficiaries of the PPP's are middle and high-income earners. Generally, even from the adverts for the sales of plots, it can be observed that most of the land servicing is taking place in the southern part of the city as compared to the northern parts where the majority of the low-income earners reside. And this is evident from table 4.6, which shows that among the 12 PPPs agreements signed by the City of Windhoek, only four are in the low-income areas of which only two projects have been completed. According to MURD respondents, low-income earners do not benefit much from PPPs because the lowest upset price for the erven previously sold, for example, was estimated to be N$190,260.00. Hence, the respondent was quoted saying that "the assumption that low prices translate to low margin of profit results in investors avoiding the low-income segment and this might be the reason for a lower number of PPPs in the low-income areas".

Furthermore, respondents from the City of Windhoek stated that the effectiveness of the PPP is rarely attainable because, of the PPPs listed, only five (Academia Ext 1 & 2, Otjomuise Ext 4, Otjomuise Ext 5, Khomasdal Ext 4 and Rocky Crest Ext 4) have been finalized and sales have been undertaken, despite the fact that not all erven have been sold. The remaining seven PPPs where the agreements were signed in 2017 are envisaged to be finalized and probably be sold before the end of 2022. The findings validated the report by Weber and Mendelsohn [35], who stated that unsuccessful efforts to improve housing delivery have resulted in a continuous increase in housing shortages, particularly in low-income areas, where it is estimated that more than 30,000 people are on the waiting list for land/housing, far exceeding the 2934 residential erven created through PPPs, of which the number of low-income beneficiaries is not identified.

The study also revealed that the City of Windhoek did not take time to study, monitor and gauge the strategies to better implement the PPPs, but rather they entered one partnership after another without

proper regulatory framework and strategies. The findings imply that PPPs have many potential benefits, which can only be realized if proper planning, execution, and monitoring are in place, which appears to be lacking in the case of the City of Windhoek. These findings suggest that there is a need for the establishment of an adequate strategic framework which is an important factor in the effective adoption of PPPs. Both the public and private sector need a clear policy framework to enable them to have a better understanding of the core of PPPs. Evidence presented in the study done by Babatunde et al. [60] shows that successful implementation of PPPs requires strong partnerships and an appropriate regulatory framework. Equally, well-structured PPP projects can yield long-term dividends which cannot be realized by them unless they are drawn out. Hence, a conclusion can be made that even though the concept of PPP has been brought on board, the City of Windhoek could not meet its target.

4.5. Hypothesis Testing

In order to determine the relationship between the variables (land delivered, and number of plots sold) a simple linear regression analysis using the linear regression equation ($\hat{y} = \beta_0 + \beta_1 x$) to find a best fitting straight-line equation was applied. This helped to test the reliability of the hypothesized statements as stated below;

Null Hypothesis: No relationship exists between PPPs for land delivery projects and number of plots sold

Alternative Hypothesis: A relationship exists between PPPs land delivery projects and number of plots sold.

The linear regression equation $\hat{y} = \beta_0 + \beta_1 x$

Where; X (independent or predictor variable) = Land delivered

Y (dependent or response variable) = Number of plots sold

$\hat{y}$ = estimated values of the dependent variable

β_0 = y-intercept coefficient (where the regression line cuts the y-axis)

β_1 = slope (gradient) coefficient of the regression line

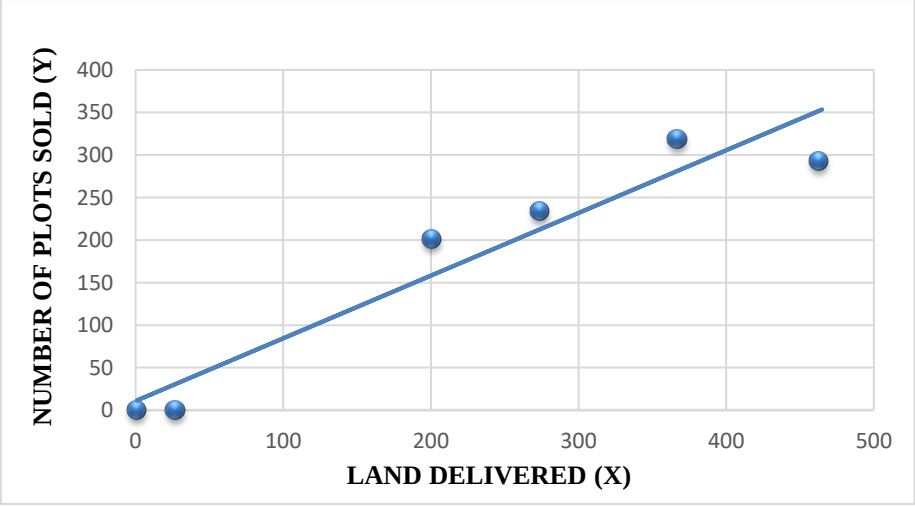

Figure 5. Scatter plot of land delivered (x) against plot sales recorded (y)

The above figure illustrates the scatter plot of land delivered (x) against sales of plots recorded (y). The graph displays the nature and the strength of the relationship between the two variables. Looking at the scatter plot, a strong, direct linear relationship with small dispersion exists. To measure the strength of the linear association between land delivery (x) and plots sold (y), a correlation analysis of 0.96075 was obtained using Pearson coefficient.

Table 3. Linear regression results

Model	x	y	β_1	β_0	$\hat{y}$	r	df	t-stat	t-critic	Signf.
1	1333	1047	0.741	9.875	13.58	0.96075	4	6.9295	2.776	0.025

The regression equation was constructed from sample data. To prove that there is a true relationship between land delivery (x) and the number of plots sold (y) and that the relationship is not by chance, a two tailed hypothesis test (t-stat), where Ho: $\rho=0$ (land delivery and plot sales are not related) and Ha: $\rho\neq0$ (land delivery and plot sales are related), was performed using correlation coefficient at 5% level of significance and degree of freedom of 4 with a t-crit = 2.776, thus the region of acceptance for H0 lied between $-2.776 \leq t \leq +2.776$. However, the sample test statistic, t-stat = 6.9295, which lied outside the region of acceptance of H0 was obtained. As a result, the null hypothesis was rejected at a 5% level of significance. This means that there is strong enough sample evidence to conclude that the alternative hypothesis is probably true. Therefore, a strong positive statistical relationship between land delivery and the number of plots sold exists. From the study findings, it can be observed that there has been a persistent increase in demand for land over the years which is not matched by supply. Perhaps this means that the City of Windhoek has not been able to cope with the complexity of land delivery in the city. Hence, the number of plots delivered is inadequate when compared with the projection of housing needed. Equally, this might explain the reason why residents choose to patronize informal land market or invasion.

4.6. What do you think are the factors influencing failure of PPPs in land delivery projects?

Table 4. Factors affecting the effective implementation of PPP

Factors	Mean	S. D	Ranking	Impact Level
Regulatory framework	3.95	3.57	1	high
Institutional Capacity	3.89	3.51	2	High
Project monitoring and evaluation	3.57	3.24	3	High
Political will	3.22	2.89	4	Small
Governance	3	2.73	5	Small

To achieve extensive results on the factors affecting the implementation of PPPs for land delivery, a combined discussion of both the survey and interviews on the factors influencing failures of PPPs was used. Table 4.8 shows the overall ranking of factors affecting the implementation of the City of Windhoek PPP project in land delivery. The researcher used a Likert scale to assess the level of impact based on the mean rating (MR) computation. A five categorical ranking scale was used to rank variables, where 5 and 1 represent the highest and lowest ranking. A mean cut-off point based on mid-points > 2.50 was considered reasonable in determining the level of impact; in this regard, it was revealed that the impact level for all five factors was above the mean. Factors such as regulatory framework, institutional capacity and project monitoring and evaluation have a very high impact on the implementation of the City of Windhoek PPP project in land delivery with the mean rating of 3.95, 3.89

and 3.57 respectively and therefore, ranked number 1, 2 and 3. Factors such as political will and governance have a small impact and have been ranked number 4 and 5 with a mean rating of 3.22 and 3 respectively.

Upon interview, respondents mentioned that failure of PPPs in land delivery can be linked to the disregard of regulatory rules by partners. Respondents identified legal issues such as non-adherence to the rules and regulations, unclear provisions and biasness in favor of some partners as the major cause for failures experienced in the implementation of PPPs. The findings from the interview are supported by observations from literature reviews, for example a study done by Kajimo & Opawole [6] which stated that poor performance of PPP projects is attributed to ineffective PPP policy and strategies. It has been revealed that experience has shown that some of the City of Windhoek's projects have been undertaken without following rules and regulations as set by the authorities. For example, what is on the ground is different from the approved designs which in most cases lead to the demolishing of services that have already been installed. Similarly, one of the officials in an interview singled out that *"poor contractual agreements and complexity of PPPs project as a major challenge"*. These views are consistent with those expressed in [36], which focused on the implications of the complex contractual structure of PPPs, namely that poorly drawn legal frameworks result in poor contracts and the emergence of disputes. Therefore, the implication of the findings is that the inability to identify existing challenges lead to persistent projects failure and resource wastage as the housing shortage continues.

Furthermore, the findings show that, the response from both organizations (City of Windhoek and Ministry of urban and Rural Development) compliments each other by agreeing that lack of institutional capacity is a major obstacle in the implementation of PPP projects. Therefore upon Interview, one respondent specified that *"establishment of a department that sorely deals with the organizations PPPs projects could help the City of Windhoek take more charge of the projects because currently they the section that deals with PPPs in the organization rely on inputs from professionals in other departments who have priorities and deadlines on other projects than land delivery. The key argument for such arrangement is to have a center of expertise for institutional support in the implementation of PPP projects".* This is advantageous in the sense that it will boost the institution's capacity to deal PPP projects. As of current, projects get delayed because of having to wait for other departments to pronounce themselves. Such case has been reported in the most successful PPP market in the UK where it is reported that dedicated PPP units serve as center of expertise which in turn boost the confidence of staff members [20]. Similarly, Abdul-Aziz and Kassim [59] observed that *"the public agencies' negotiation skills and adequacy of negotiation staff have an effect on delivery of housing projects and are equally inter-related".*

In most developing countries, the application of best practice in project management has always been an issue. The lack of Ubuntu spirit among stakeholders leads to projects that are inappropriately structured and traditional construction procedures. A study done by the World Bank [16] pointed out that the lack of effective project management has resulted in poor project performance. Findings from the research agree with the remarks in the literature review. For instance, respondents recognized that inadequate project management, evaluation and monitoring is a key problem. This is because a greater part of project management and monitoring is normally left to the private partner, thus giving them the opportunity to make changes which lead to conflicts. The findings revealed that the process of reviewing and receiving feedback from completed projects is rarely practiced in the study. The impact of the findings is that projects that are not monitored can easily deviate from agreed output. Therefore, continuous monitoring can be a control mechanism for monitoring project performance to keep track

of the milestones and challenges encountered. This would help the organization to identify challenges and acquire adequate information for implementation of future projects.

These are the obvious reasons for the City of Windhoek's inability to provide a comparable number of erven for low-income residents. Many respondents are of the opinion that the lack of political will to develop a framework which is properly articulated for the implementation of PPP has a negative impact on the output of PPP projects. Thus, the City of Windhoek, together with the government, should consider adoption of different guidelines for implementation of PPPs projects for low-income housing. The absence of a favorable micro-economic and political environment is very visible because there is no policy framework that would have encouraged the formation of viable housing options and this can be blamed for the comparatively low percentage of land delivery in the low-income sector. Experience from a study done by Abdul-Aziz et al., [59] has shown that the engagement of public agencies in providing services to the private sector for the purpose of reducing cost has proven that state market partnerships are profitable in low-income housing. The City of Windhoek could adopt strategies by providing incentives such as lowering the standards of building as well as sponsorship of low-cost housing development through pension funds which could be sold below the market price to low-income earners. Therefore, inference can be made that the current PPP structure lacks the basic elements needed for improving the accessibility of housing to low-income earners.

Respondents further stated that there seems to be a lack of continuity, misplacement of priorities and inadequate planning by the government. The consequences of these actions have led to projects being abandoned, stalling and delays in project completion. Lack of support from and commitment from political leaders in creating policies for infrastructure development could affect the implementation of projects. Hence, support from both political leaders and citizens is an important factor for successful implementation of PPPs. Lastly, respondents equally identified good governance as an important factor because it brings about transparency and ethical behaviors of parties involved in the project. Respondents acknowledged that unethical behaviors in the implementation of PPPs projects have been experienced and affected the procurement process of some of the projects. There have been reports of corruption by officials which is attributed to weak governance and institutions coupled with unclear agreements. However, some respondents believe that the government has taken a step to ensure that the procurement system is transparent. The reason put forward was because of cases where some officials have been taken to court on account of corruption. It is difficult to establish a real partnership in the absence of a governance environment that favors both public and private partnership.

In the context of this study, factors mentioned above were identified as equally used as strategies suitable for mitigation or solving the challenges confronted in implementing PPPs projects. It is anticipated that the greater the likelihood of these factors being incorporated into the PPPs approach, the greater the chances of success, because the absence of these factors is also regarded as a challenge.

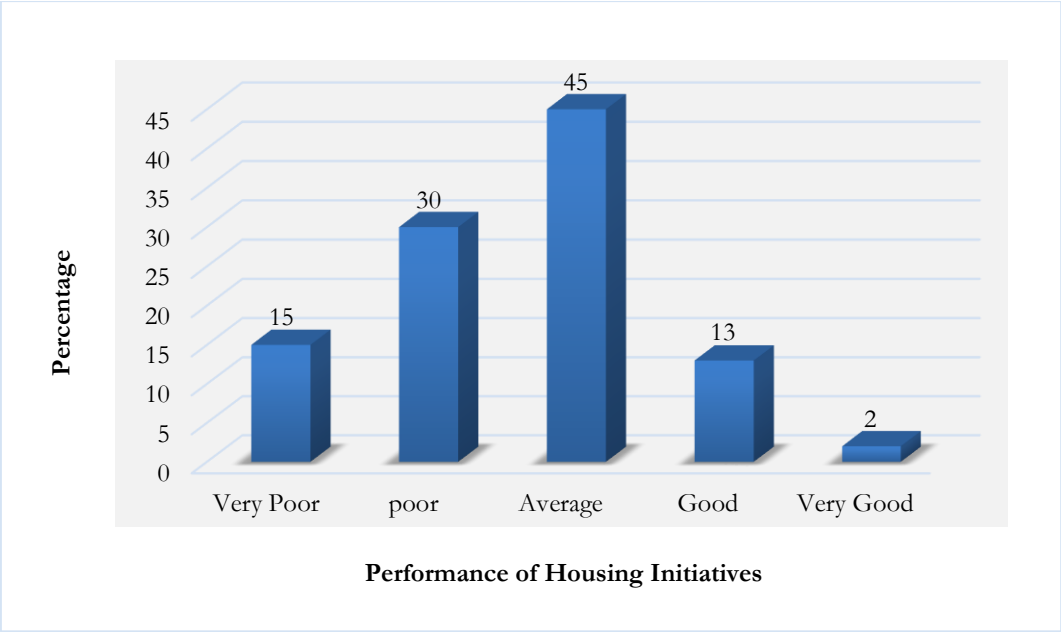

Figure 6. Performance of COW housing initiates

To assess the performance of the current housing initiatives in low-income areas, respondents were asked to rate the notable housing programs such as Build Together Programme and Windhoek Housing Scheme, based on a Likert scale of 1 to 5, where 1 is very poor and 5 is very good. The outcome shows that 15 percent described that the current housing initiatives have not significantly contributed to the reduction of the housing shortage hence they felt that they were not effective enough and rated them to be very poor. Alternatively, 30 percent of the respondents indicated that the housing programs were poor and about 45 percent reported that the programmes were neither poor nor good on average. While 13 percent and 2 percent of respondents rated the programmes as good and very good. Generally, the total rating for the initiatives as either very poor or poor is 45 percent. Hence the outcome of the finding implies that the housing initiatives have not provided a satisfactory outcome for both operational expenditure and housing supply.

These findings strongly relate with the City of Windhoek report (2017/2018), where it was estimated that a total amount of N$54 000,000 was outstanding on the capital account for the two schemes `and this accounts for 90 percent of the debt. Where else approximately, an amount of N$6 000,000 on the installment account for the two schemes was also outstanding, accounting to 10 percent of the total debt. In total it is believed that an amount close to N$60 000,000 was outstanding. Therefore, looking at the figures, it can be concluded that the two schemes were poorly managed hence not meeting the objectives they were created for. Thus, the performance of the schemes has resulted in Council taking a moratorium to put the two schemes on hold.

Notably, the study found that the City of Windhoek as a local authority has not been involved in PPPs for housing but rather for land delivery. Respondents had a consensus that the City of Windhoek has not properly formulated a framework for the implementation of PPPs in housing because they are still experimenting with the approach in the provision of housing. Hence, proper mechanisms for the implementation of the model are being designed. For example, there is a pilot project on PPPs for

affordable housing intended to replace the Build Together Programme and Windhoek Housing Scheme. Respondents mentioned that low-income people are a priority in the current PPP joint-venture approach for housing. The agreement is being made by the City of Windhoek, MURD, NHE and MoF. Based on the findings of the study, it is advisable that the City of Windhoek should take cognizance of the fact that a smooth implementation of the PPP approach in public housing delivery requires a comprehensive policy framework to enable the implementation of all variants of PPP in housing units.

4.7. How effective has been government's contribution towards land and housing delivery?

Respondents mentioned that government has acknowledged the slow supply of serviced land and its impact on housing prices not only by the City of Windhoek but other local authorities across the country. As a result, the government has introduced several interventions with the intention of alleviating the challenge. Respondents gave examples of interventions such as the Targeted Intervention Programme for Employment and Economic Growth (TIPEEG) programme whereby they committed to providing more serviced land throughout the country, with the aim of delivering 185, 000 housing units with a yearly target of 10,300 units by the year 2030. The programme was halted by many challenges to an extent that only 40.8% of the housing units in 2014 were delivered country wide hence it was suspended in 2015 due to cost implications and unresponsive institutional framework thus rendering its ineffectiveness. Additionally, it was mentioned that upon the failure of TIPPEG, another intervention was introduced under the Harambee Prosperity Plan (HPP) which committed to deliver 6,500 serviced residential plots and 5,000 housing units annually. By the year 2016, only 34% of the targeted urban serviced plots were delivered across the regions. Then there was Mass Housing Development Programme aimed at building 185, 000 houses across the country at a cost of N$45 billion. However due to irregularities the programme was stopped and approximately 1122 houses were incomplete while 2836 houses were completed and occupied. To date none of the houses constructed through MHDP in Windhoek has been occupied due to noncompliance with building standards. Furthermore, Mass Urban Land Servicing Programme came on board with the intension of providing serviced land totaling to 180, 000 erven across the country. Like all other initiatives, the programme never took ground in the case of Windhoek. Despite the intervention from the government, the land and housing initiatives have not been effective, as evidence can be seen in the increasing number of housing shortages and informal settlements. The ineffectiveness of the housing initiatives is attributed to high land prices, whereby land prices take up a large portion of the cost of a new house (Karuaihe, 2019). It is evident that the lack of adequate planning and implementation in the public sector schemes yields a low success rate and an inability to deliver adequate housing units to the residents.

5. Conclusion and Recommendations

Public Private Partnerships has been used and applied as a tool to promoting efficiency and timely delivery of goods and services. However, the current practice has not effectively delivered the potential benefits promised, especially for the low-income earners. In this study, the belief that the City of Windhoek as in many other local authorities in middle-income countries face a challenge of insufficient funding in the deliverance of municipal services that include serviced land for housing development has been validated. In order to overcome such challenges, the City of Windhoek adopted the PPP strategy to deliver land which has not been an easy task. The lack of success in combating the slow-paced land and housing delivery is demonstrated by the continued mushrooming informal settlements

on the outskates of the City. The housing problem for low-income earners remains persistent without concrete solution thus far. This problem emanates long before independence where no housing policy for urban poor existed to which blame is occasionally shifted by government. However, even after the introducing of housing policies and numerous housing initiatives such as the Namibia Housing Enterprise-NHE, Mass Housing Development, Harambee Prosperity Plan-1, Shack Dweller Federation of Namibia, housing shortages in the grassroot segment of society remains constant. Visibly, little progress has been achieved in the providing of urban land and housing for the low-income group. The City of Windhoek should intensify active participation among stakeholders involved in the implementation of PPPs for land development to achieve success. In the context of this research, the stakeholders are local authorities, government, private firms, financial institutions and citizens. Land development process requires the participation of both stakeholders and this mechanism was found lacking by the study. Hence, the City of Windhoek should attempt to deal with challenges presented by urban development with full participation of government. To achieve the envisaged and desired success much remains to be done in land delivery through PPPs. Even though the findings of the study point to the Triple-P model not having yielded the desired outcome, especially in low-income areas, a possibility exists in addressing the identified challenges through stakeholder engagement.

Further inference drawn from the study finding zero-in on the concept of PPP not being properly implemented. It is evident that ambiguous project implementation is by-part responsible for the failures and slow-paced project completion because it takes approximately five years for a project to take off the ground. The conclusions presented in the study were drawn from the findings of the study and experience of previous studies. The objectives of the study, namely; to determine the effectiveness of Private-Public Partnerships in land delivery, to evaluate the benefits of Public-Private Partnerships in land delivery and low-income housing and to identify challenges affecting the implementation of Public-Private Partnerships for land delivery were achieved. The study brought a better understanding of the challenges and impact of land and housing delivery on low-income earners and how these challenges influence the housing market which negatively impacts the affordability of housing to the low-income segment.

Based on the findings of the research, this study makes recommendations aimed at providing possible remedies necessary in order to improve the current situation. The recommendations are summarized as follows;

- *The City of Windhoek could consider an arrangement with government to developing greater collaboration with financial institutions to allow low-income earners to have access to mortgage bonds/credit facilities through subsidized government loans.*

- *Moreover, retirement funds from the pension scheme can be used in the delivery of land or most probably construction of low-cost housing under the PPP arrangement to allow low-income earners to gain access to affordable housing using their pension contribution.*

- *There is a need to approach central government to explore the possibility of expropriating farms within the extended boundaries of the City. This will increase the land available for development and possibly reduce the land shortage and cost.*

- *There is a need to come up with innovative building technologies with cheaper construction materials to construct affordable housing for low-income earners and shift from the concept of one size fits all but to equally cater for all income groups based on affordability.*

- *Criteria's should be put in place to ensure that low-income earners are prioritized to benefit from projects that are intended for them as beneficiaries. As well as provision of low-interest rates to increase the chances of low-income earners to gain access to housing mortgages.*

- *The City of Windhoek needs to ensure that for each PPP project, a feasibility study is conducted to ascertain the viability of projects before commencement. This will ensure that projects are carried out in a manner that is sounder and more sustainable. Additionally, feasibility studies are important because they inform decision makers about how feasible and desirable a project undertaking will be as well as its readiness to commence.*

Further research with a much larger sample size from other local authorities experience in Namibia, should be explored on the effectiveness of PPPs in land delivery and low-income housing initiatives could help give a holistic approach.

Conflicts of Interest

No potential conflict of interest was reported by the authors.

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