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Research Article

Public Private Partnerships for the Development of Low-Cost Housing to Meet Kenya Vision 2030 and Related Goals

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Abstract

Article 43 1 (b) of the constitution of Kenya (2010), Kenya Vision 2030, the Bottom-Up Economic Transformation Agenda (BETA, 2022-2027) and international conventions, like United Nations Sustainable Development Goals and the New Urban Agenda (NUA), obligates Kenya to provide adequate, accessible, decent and quality housing for citizens. The country needs all manner of housing types, including low-cost urban housing as a result of rapid urbanization processes in Kenya. According to the 2019 Kenya Population and Housing Census (KPHC) by the Kenya National Bureau of Statistics (KNBS), Kenya had 14.8 million people living in urban areas, a number that will reach half of the Kenyan population by 2030. The proportion of urban population to total population in 2019 was 31.2 percent, and 40 percent of the urban households in Kenya lives in informal settlements whereby households of averagely five members generally share spaces of ten-by-ten feet, hence necessitating need for low-cost urban housing. The current demand for housing stands at 250,000 units per year, while supply remains at 50,000 units p.a, hence an annual deficit of 200,000 units. The State Department for Housing and Urvan Development (SDHUD) in Kenya estimates that this housing supply backlog of 200,000 housing units per year has accumulated to over three million housing units so far. The Public sector has not been able to effectively deliver the housing units needed while the private sector has concentrated on the middle- and high-income urban households while neglecting the majority middle- and lower-income urban households. To remedy this and bring the two sectors - public and private together to accelerate housing delivery and hence meet the aspirations of Kenya Vision 2030, application of Public Private Partnerships (PPPs) has emerged as one of the most plausible options for accelerating delivery of low-cost urban housing in Kenya. This study utilized three rounds of Delphi method to gauge the prospects of providing low-cost urban housing through application of PPPs. 88 Delphi panels made of housing practitioners, financiers and developers were engaged. It was found that PPPs are applicable in the development of low-cost urban housing in Kenya. It was concluded that PPPs are applicable in the provision of low-cost urban housing, provided there is an enabling environment and appropriate management of risks by the parties to the contract. Because of the many likely benefits arising from the application of PPPs, the country should embrace it to address housing supply and related infrastructure backlogs.

Keywords

Public Private Partnerships, Low-cost Urban Housing, Delphi Method, Urbanization, Kenya Vision 2030, BETA

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1. Introduction

Adequate and affordable housing forms part of the central pre-occupations for all classes of people globally [2, 27]. Governments have faced many constraints in their attempts to provide housing, especially for providing low-cost urban housing. This is despite housing provision being a constitutional right as per article 43 1 (b) of the constitution of Kenya, 2010 [1]. The constraints have led to under-supply of housing to the middle lower- and lower-income groups in Kenya, which has resulted in growth and development of slums and informal settlements [2]. Kenya has over 500 number of slums and informal settlements spread across its urban areas, which are characterised by inadequate housing supply [2]. Increased rate of urbanization, high population growth rates, high poverty levels, and high costs of housing financing, construction materials and development have exacerbated housing supply challenges [3, 27]. These challenges have forced many countries including Kenya to seek new ways of bridging housing demand and supply gaps. Some of the strategies employed includes privatization and liberalization (wherein there is total removal of government from housing supply and delivery, which is fraught with political and socio-economic risks); nationalization (wherein the public sector oversees delivery of housing without private sector involvement or where there is limited participation of private entities; and the application of PPP, which offer innovation, managerial expertise and greater value for money, economy, efficiency and effectiveness compared to the traditional procurement methods [2]. In the past, fragmented application of PPPs in the housing sector in Kenya has been attempted with minimal success. This study sought to identify effective solutions to enable stakeholders effectively apply PPPs in low-cost urban housing development in Kenya. This is because the concept operationalizes efficiency, risk transfer, innovation, addition finance, technology and more returns to investors [4].

The reason why PPPs are better than the traditional piece meal public sector awarding of contracts is because under the model, the public sector uses its revenue base, and the private party leverages its ability to mobilize capital and resources to achieve common goals for housing delivery [5]. To demonstrate the need for innovation in housing supply and hence meet an ambitious target of delivering one million houses by 2027, Kenya has prioritized active participation of private players, including application of PPPs [4, 2]. PPPs can be seen as voluntary and collaborative partnerships between a wide range of private and public players, where government participates throughout the project cycle by setting standards, regulations, laws, evaluation and monitoring. The private sector on the other hand is charged with actual delivery of the targeted housing units as per specifications and agreed deliverables [2, 4].

1.1. What Are PPPs and What Is the Motivation for Their Use

As a result of the way PPPs have evolved in the world, there is no one-fits-all definition for the concept and its models. Countries are therefore at liberty to use diverse meanings, approaches and frameworks of PPPs they deem fit for their stage and situation [22, 2]. To illustrate this point for example, the Canadian Council for PPPs defines Public Private Partnerships as "a cooperative venture between the public and private sectors, built on the expertise of each partner, which best meets clearly defined public needs through appropriate allocation of resources, risks and rewards" [23, 2]. The envisaged partnerships are carried out through contractual obligations entered into by the parties, and this makes completion of projects faster, in an efficient manner and in a short delivery time [2, 5]. Further, PPPs can be defined as an arrangement implemented between public and private entities with the aim of providing public facilities, where significant investments are made and managed by the private party. This is undertaken in a defined timeline, within well-defined risk allocation parameters amongst the parties [2, 19]. The private entity in such an arrangement receives payments based on levels of performance which must align to specified contractual undertakings, which are evaluated by the public sector partner [2, 5, 19].

The major drive towards PPPs is that it has been proved over time that the private sector is more flexible in terms of time, costs and ideological shift than the public sector. The public sector does not possess abilities for massive resource mobilization required for large infrastructural projects while private participation in infrastructural development lessens the government financial burdens [20, 2]. The private sector possesses more skills, knowledge and technology with which it can be used to provide quality and superior facilities like low-cost urban housing [2, 5, 19]. PPPs offer many benefits when applied in infrastructural provision; help to improve the overall quantity and quality of infrastructure; are applicable across public sector infrastructural needs in areas of housing, hospitals and schools. PPPs have the ability to make projects complete on time and budget than opposed to conventional financing by the government, which is fraught with many delays. This helps the public sector bodies to acquire financial discipline and fiscal capacities to ensure projects have commercial approaches to development, and allowing the government to retain strategic control of the infrastructure asset and services derived from it [2, 5, 19, 20].

1.2. Case Studies on the Application of PPPs

Studies have demonstrated the extent to which PPPs in housing and student accommodation have been successful in different countries across the world [2, 5, 19-21]. Additional research in the realms of applicability of PPPs looked at how the frameworks can facilitate diverse projects and programmes, including low-cost urban housing in a country [2]. Still other

studies have dwelt on the contributions of PPPs in addressing housing challenges in different countries including Nigeria (Ibem, 2011a; 2011b; Adegun and Taiwo, 2011). Abdu and Kassim (2010) pointed out that PPPs have been utilized in the delivery and development of housing in countries like: Mexico, Pakistan, Egypt, India, South Africa, Bulgaria, Russia, Thailand and United Kingdom [22, 2]. Other countries that have utilized PPPs in housing are Australia, USA, Canada, Malaysia and Indonesia [21, 2]. According to the Pacific Economic Cooperation Council, Guidelines for Effective Public Private Partnerships (2006), an effective low-cost urban housing strategies under PPP should involve inclusive development and affordability; trust and cooperation; stability and predictability; accountability and risk management; infrastructure financing optimization among others [23, 2].

In the African continent for example, the Egyptian government under its Mubarak Youth Housing Project between 2005 -2011. The government allocated 450 acres of land, in addition to offering incentives and other legislative support to the Orascom company that implemented the development of 50,000 to 70,000 low-cost urban housing. The government provided that half of the land would be dedicated to low-cost housing projects and the rest would be for middle- and high-income housing [2]. These housing units were to be implemented within six years and were undertaken as part of the National housing programme that was undertaken for the Orascom housing communities. The government paid the private entities annual installments but also paid a 10 percent advance with a grace period of three years. The government also worked with citizens, private entities, banks and some companies to establish a housing fund from which individuals would get loans for uptake of completed houses or companies would get funds for faster housing completion [5, 2, 22].

1.3. Principal Agency Theory to Explain PPPs in Low-cost Urban Housing

The Principal Agent Framework or theory (PAT) was developed to explain application of PPPs in down market urban housing among other infrastructure services. In the theory, the entity called “the principal”, uses another entity called “the agent”, to undertake some functions on their behalf, through adequate decision-making being ceded to the contracted agent [2]. The agent is most of the time supposed to have a risk appetite whereas the principal is risk neutral, and as such the principal allocates the agent some risks, financing, construction and other functions with their attendant risks. PAT theory demonstrates the cooperation between the public and private entities in a PPP arrangement for service delivery. An agreement is made on where to deliver the services and infrastructure; and it brings about more partnership and cooperation between parties, and the certainty that workable partnerships can be structured between such parties [2, 23, 19]. PAT deals with strategies through which risk allocation is done in a partnership, and for good outcomes and high performance. The principal (government) is mandated to allocate the Agent (private entity) enough incentives to optimally deliver the agreed project outcomes [2]. PAT literature focuses on the methods and systems that become evident in aligning the interests held by principal and agents and their consequences and incentives structures [2, 22, 21].

2. Methodology

The study adopted the Delphi method of research to gauge the applicability of PPPs in the development of low-cost urban housing in Kenya. Delphi technique is a qualitative method of research used where the issue under investigation has not been explored before or is partly developed [24]. It is an iterative two to five round questioning method, carried out through online platforms, hybrid or in person methods [11, 15, 10]. Delphi methods combine expertise know-how in a given area of inquiry, with the aim of making predictions, forecasts and informed judgement on future application or utilization of an intended idea. This is done through consensus building as a result of iterations/rounds of discussion with the experts [6, 7]. The common characteristic which is salient in Delphi study is that the communication and engagement of the experts is structured in a group or panel anonymously. It is the researcher who should know the experts in person, but the experts should be kept as anonymous as possible to ensure that group dominance and bias is eliminated to a larger extent [15, 10].

A Delphi panel of 15 -30 persons is the ideal sampling frame for homogenous group of experts [12]. This study utilized three panels of 25 -30 persons per panels [13, 14, 25]. This is because many studies have found out that there is no relationship between the panel size and effectiveness and efficiency of data collected [15, 25]. On the distribution and Attributes of the panels, the study utilized selected 30 Housing Financiers, comprising of employees of banks involved in the advancement of loans and mortgages for housing development in Nairobi city county. The second panel was made of selected 28 housing developers from the leading firms and construction companies dealing with housing development within Nairobi city, whose membership was drawn from Kenya Property Developers Association (KPDA). The third panel consisted of selected housing officers in the Nairobi city county and the State Department for Housing and Urban Development (SDHUD).

On Data collection procedures under Delphi, Linstone &Turoff (2002); Seuring & Muller (2008) and Okoli and Pawlowski (2004) With regard to data collection procedures, it is agreed amongst Delphi professionals that a Delphi study should be carried out up to the point or level where no further insights or new discoveries emerge, which would fundamentally change the nature of the results [9, 15-17]. This research utilized three (3) rounds Delphi questioning process, which have been considered to be adequate to answer the underlying issues in the applicability of PPPs in low -cost urban and the projections. Open ended questions were administered to the

respondents, where in the first round, exploratory questions were asked, after which content analysis was undertaken. The answers generated for round one formed questions for round two; and answers obtained in the second round of questions were used till the third round [16-18, 26].

3. Results and Discussions

In round one Delphi, which was an exploratory stage, and where questions were not constrained to some areas, it was found that 95.5 percent of the panellists were of the opinion that PPPs can be applied in the development of low-cost urban housing, while 4.5 percent were of the opinion that PPPs are not applicable in the development of low-cost urban housing in Kenya. The 95.5 percent who believed PPPs could be applicable in the development of low-cost urban housing, they provided four possible ways to actualize this: First, is the provision of land for low-cost urban housing by the public sector/government, which should be treated as equity contributions from the government side. Land is a key ingredient for housing development and most developing countries have land challenges and limited availability for such projects. In addition to land, the government should provide housing infrastructure to incentivize the private sector investments into low-cost urban housing through PPPs, which had a frequency of 57 or 64.8 percent. Housing infrastructure - access roads, high mast security lighting/street lighting, drainage canals, footpaths/pedestrian walkways, trunk water and sewer lines, waste management facilities typically consume almost 30 -40 percent of any housing development project. If these services are provided by the public sector, it reduces the cost of housing development and hence increased private sector activities on housing and real estate development.

Secondly, the government should provide some guarantees, targeted incentives, creating an enabling environment, utilization of sovereign wealth funds like NSSF and other retirement benefit funds, unclaimed financial assets, all of which recorded a frequency of 17 or 19.3 percent. The need for these guarantees is because of the high risk of the low-cost urban housing schemes and projects, hence the guarantees and incentives de-risk the projects. Thirdly, the panelists stated that there is need to utilize various PPP models like Build Own and Operate (BOO), Build Own and Transfer (BOT), Design Build Maintain (DBM), land swaps, joint ventures and turnkey models, all of which recorded a frequency of 8 or 9.1 percent. In most cases, it would be ideal to mix the models to ensure maximum returns and reduced risks for the parties. Fourthly, PPPs could be made applicable in the development of low-cost urban housing by incorporating mixed project delivery methods for housing development, for example - combining methods like the outright sale, social housing, rental housing, tenant purchase models, incremental and cooperative housing, all of which had a frequency of 6 or 6.8 percent. In order to increase the uptake of low-cost urban housing through PPPs, it is ideal to mix methods for uptake of the completed housing units. Kenya has a well-developed Savings and credit Cooperative unions - SACCOs, which provides ideal bulk uptake of such developed housing units. These results are as highlighted in Table 1.

Table 1. *Possible ways through which PPPs could be applicable in low-cost urban housing.*

S/No	Item	Frequency	%	Rank
1.	Provision of land and housing infrastructure Public institutions	57	64.8	1
2	Provision of guarantees, incentives; enabling environment & diverse financing & uptake models	17	19.3	2
3.	Utilization of various PPP models	8	9.1	3
4.	Incorporate mixed delivery methods for housing	6	6.8	4
	Total	88	100	

The study found out that there were five major challenges likely to face the application of PPPs in low-cost urban housing in Kenya. These were: first of which was the longer PPP transaction and implementation periods (occasioned by the long time it takes to prepare, structure, advertise, negotiate, award and operationalize PPPs); high cost of financing (PPPs require a lot of structuring of the debt-to-equity ratios and aspects of projects. There must be adequate ratios of these sections); high-profit drives/motivations of private players (the private sector always has its eyes on the profit maximization hence need to align the projects); low resource mobilization strategies by the public sector to support PPP programmes, and the existence of inadequate incentive structures, all of which had a frequency of 33 or 37.5 percent. Secondly, is the likelihood of inadequate access to serviced land, housing infrastructure, and accessibility to services/utilities in areas earmarked for low -cost urban housing development, which recorded a frequency of 23 or 26.1 percent. Thirdly, there was the likelihood of inadequate PPP operationalization laws, regulations and institutions, especially on social housing, which rec-

orded a frequency of 15 or 17.1 percent. The fourth issue is lack of common and shared vision, goals and values for housing the urban poor, occurrences of corruption and political interference, which recorded a frequency of 10 or 11.4 percent. Fifth, was the likely challenge of inadequate knowledge on how PPPs can be structured to be effective in developing low-income urban housing, which recorded a frequency of 7 or 7.9 percent. These five likely challenges are as presented in table 2.

Table 2. *Challenges and solutions to the applicability of PPPs in low-cost urban housing.*

S/No	Challenge	Frequency	%	Rank
1.	Longer PPP transactions time	33	37.5	1
2.	Inadequate access to serviced land	23	26.1	2
3.	Inadequate PPP operationalization laws & regulations	15	17.1	3
4.	Lack of common vision, goals & values	10	11.4	4
5.	Inadequate knowledge on PPPs, structuring, implementation	7	7.9	5
Totals		88	100	

The participation of the private sector in the development of low-cost urban housing through PPP models is key because the private sector acting alone has been unable to deliver the required units. This has led to supply backlogs and hence development and proliferation of slums and informal settlements in Kenya. Six reasons were identified as the reasons that are likely to hinder the participation of the private sector in PPPs for low-cost urban housing. First was the existence of incompatible project goals, vision, objectives and motivations of the public and private players, which had a frequency of 35 or 39.8 percent. Secondly, is the likelihood of bureaucratic red tapes, disincentives and poor investment climate within the country at the time, with a frequency of 23 or 26.1 percent. Thirdly, is limited awareness on how PPPs should work and how they should be structured, which had a frequency of 12 or 13.6 percent. Fourthly, the existence of non-responsive policies, laws, regulations and institutions, which contributed to uncertainties on investments made by private developers. This challenge had a frequency of 10 or 11.41 percent. Fifth was the existence of inadequate long term financing structures for PPPs in the development of low-cost urban housing, with a frequency of 8 or 9.09 percent. These findings are as illustrated in Figure 1.

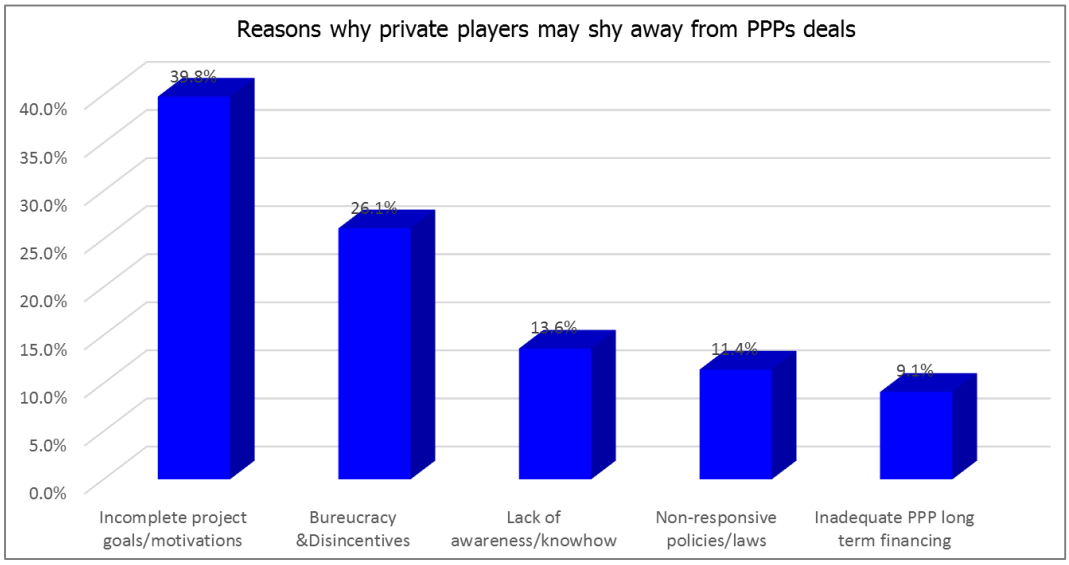

Figure 1. *Why private parties have not fully participated in PPPs for low-cost housing.*

During round two Delphi results, the panellists provided seven possible ways in which PPPs could be made applicable in low-cost urban housing in Kenya. The first being the need for the country to rely on successful case studies from inter-

national developers and financing institutions, which recorded a frequency of 192. Secondly, was the need to make the legal and regulatory environment suitable and fitting for the application of PPPs in developing low-cost urban housing, with a frequency of 144. Thirdly, the need to use diverse sources of financing low-cost urban housing through the utilization of sovereign wealth funds with a frequency of 128. Fourth, is the need to address housing commodification challenges especially in the demand and supply sides of housing development, with a frequency of 125. Fifth, is need for government to provide housing infrastructure while investors providing innovative capital, technology, innovative development approaches and managerial prowess in low-cost urban housing development. These attributes recorded a frequency of 120. Sixth, is the need to utilize various PPP models like joint ventures, turnkey, land swaps among others, with a frequency of 119. Seventh, was need for government to offer guarantees, enabling framework and targeted incentives, which recorded a frequency of 103. These findings are as illustrated in Figure 2.

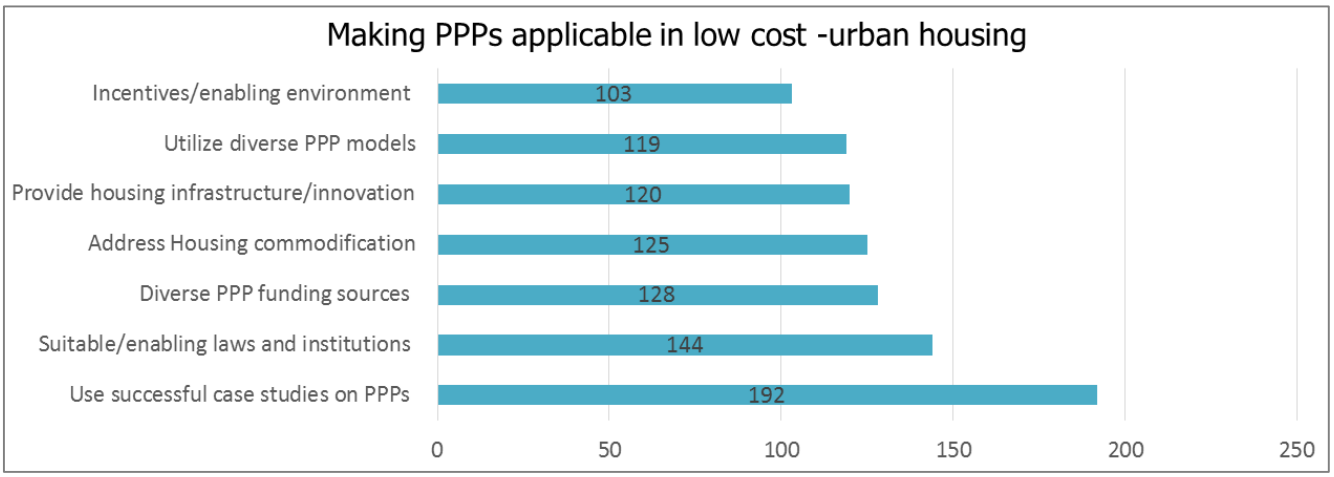

Figure 2. *Proposed methods through which PPPs can be made applicable in low-cost urban housing.*

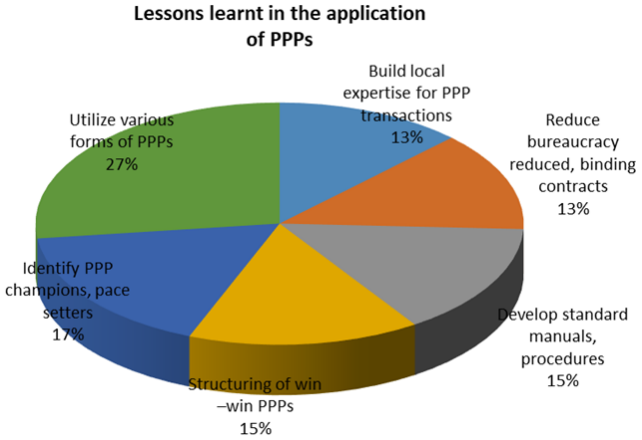

Figure 3. *Combined lessons learnt in the application of PPPs in low-cost urban housing.*

Six key lessons in making PPPs applicable in low-cost urban housing were identified in the process: Firstly, there is the need to build local expertise to undertake PPP transactions, with a standard deviation of 0.30 or 13 percent. Secondly, PPP was noted to be workable and bankable development model for the development of low-cost housing in Kenya, with a standard deviation of 0.32 or 13 percent. Thirdly, there should be the development of standard PPP procurement, structuring and development manuals, adequate procedures and processes, with standard deviation of 0.36 or 15 percent. Fourthly, there is need to structure, negotiate, construct and come up with workable PPP transactions and programmes through balancing the stakeholders' needs and interest, with a standard deviation of 0.37 or 15 percent. Fifth, there is need to identify PPP champions, pacesetters, workable case studies and at the same time establish key performance indicators for PPPs in low-cost urban housing amongst other issues, with a standard deviation of 0.41 or 17 percent. Sixth, was highlighted by the fact that application of PPPs should utilize various models and approaches like joint ventures, turnkey, land swaps and a mixture of models, with standard deviation of 0.65 or 27 percent. These proposals are as shown in Figure 3.

It was noted that despite PPPs being noble models which can be applied to resolve and address housing supply issues, challenges stood in the way of its application. Six major challenges were identified as the ones that were likely to hinder the application of PPPs in low-cost urban housing in Kenya. These were first, the long periods taken to implement PPP projects before the investors can recoup their investments, with a standard deviation of 0.25. Secondly was inadequate laws, regulations and institutional frameworks and enabling environments for low -cost urban housing development in

Kenya, with a standard deviation of 0.29. Thirdly, is political interference in implementing PPPs for low-cost urban housing and attendant corruption, with standard deviation of 0.30. Fourthly, there was the likelihood of lack of common shared vision and goal with a standard deviation of 0.31. Fifth is inadequate knowledge on how PPPs operate and work in some sectors like the construction of low-cost urban housing, with a standard deviation of 0.37. The sixth lesson was lack of adequate serviced land with social and physical infrastructure (housing infrastructure), with standard deviation of 0.38. These challenges are as per figure 4.

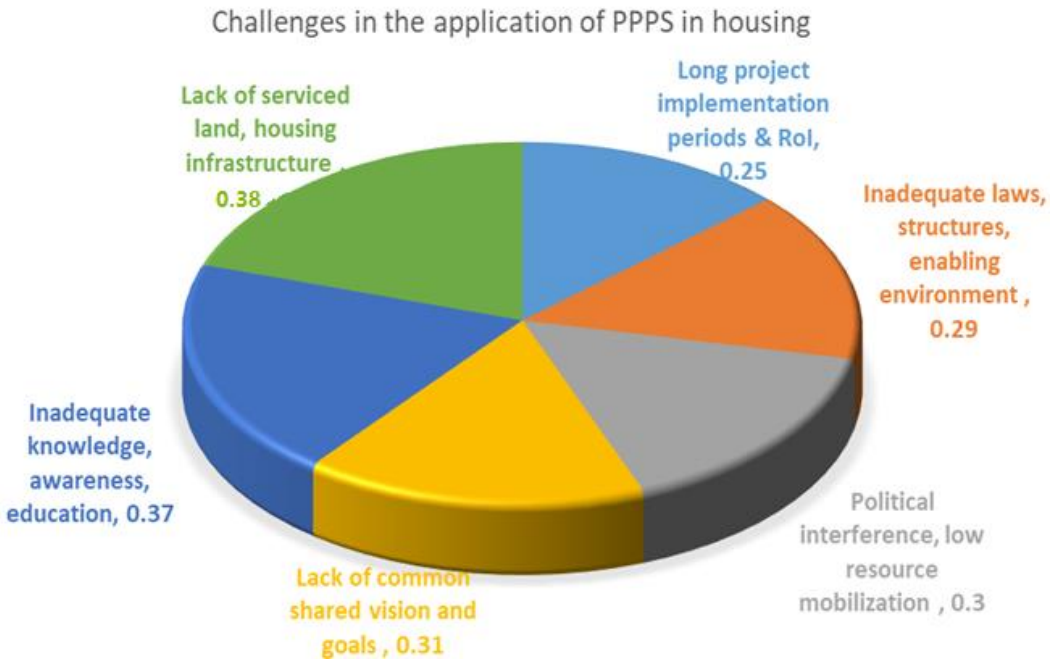

Figure 4. *Challenges likely to face the application of PPPs in low-cost urban housing development.*

4. Conclusion

The article demonstrated that the Affordable Housing Programme (AHP), low-cost urban housing and other infrastructure development agenda of government cannot be adequately financed by the public pulse and financing alone. This is because the public sector has challenges in obtaining adequate financing since many countries continue to face financial crises for many years and times; in addition, the public sector cannot access adequate technology, managerial expertise, efficiency, economy and effectiveness needed to deliver low-cost urban housing. The public sector financing of housing has been shrinking as a result of complex demand for services and bulging population which increases demand for housing. The private sector has often concentrated in the housing needs for the upper and middle upper income earners, hence neglecting the low and medium low-income earners, hence the growth of slums and informal settlements in Kenya. In order to bring the two players - public and private entities, PPPs have been identified as being key in the development of low-cost urban housing to meet the aspirations of the Kenya Vision 2030, BETA, African Union agenda 2063 among others on the provision of adequate, decent, quality and accessible and affordable housing for all.

Under PPPs, there is greater utilization of the private sector finances, technology, innovation, economy, efficiency and effectiveness to deliver superior products and services. PPPs have been successful in other sectors of the economy and as such, with the right structuring, the concept can be applied in development of low-cost urban housing development. The possible ways through which PPPs could be applicable include the provision of land and housing infrastructure to encourage private sector involvement in PPPs for low-cost urban housing. In addition, the public sector should provide guarantees, incentives and enabling environment; utilization of various PPP models and methods; and incorporating mixed delivery methods for low-cost urban housing. Though the application of PPPs is ideal, many challenges hinder its effective application. These include longer PPP transactions time for PPPs; inadequate access to serviced land; inadequate PPP operationalization laws/institutions and regulations; lack of a common vision and goals for housing the urban poor; and inadequate knowledge on PPPs/structuring and implementation. The reasons as to why private entities have not fully been participating in PPPs include - incompatible project vision and goals; bureaucratic tendencies and disincentives; inadequate

awareness and education on how PPPs operate; non-responsive policies; and inadequate long-term financing of PPPs. To solve these challenges, it is proposed that: there is need to rely on successful case studies on PPPs application; creation of an enabling environment for PPPs application; institutionalizing diverse PPP funding strategies; addressing housing commodification challenges; provide housing infrastructure and utilize divers PPP models. Application of PPPs should be spearheaded by the government through creation of adequate enabling legal, regulatory and institutional environment for application of PPPs.

Abbreviations

AHP	Affordable Housing Programme
BETA	Bottom-Up Economic Transformation Agenda
BOO	Build Own Operate
BOT	Build Own Transfer
DBM	Design Build Maintain
KNBS	Kenya National Bureau of Statistics
KPDA	Kenya Property Developers Association
KPHC	Kenya Population and Housing Census
NSSF	National Social Security Fund
PPP	Public Private Partnerships
SDHUD	State Department for Housing and Urban Development
SDGs	United Nations Sustainable Development Goals
UN Habitat	United Nations Human Settlements Programme

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Ethical Considerations

This study has ensured that all the necessary ethical considerations are complied with while undertaking the research. Ethical considerations that have been factored into this study include considerations for any harm against participants, consent, privacy, and the confidentiality of data, risks and benefits of participating in research, and voluntary participation. In this study, informed consent included allowing participants to choose to participate in the study, but significantly to document their acceptance by signing off on the form of the consent, where necessary.

Author Contributions

Daniel Mutegi Giti is the sole author. The author read and approved the final manuscript.

Conflicts of Interest

The author declares no conflicts of interest in the process of undertaking and writing this research paper.

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