

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY,**

**KUMASI**

**COLLEGE OF ARCHITECTURE AND PLANNING**

**DEPARTMENT OF BUILDING TECHNOLOGY**

**KNUST**

**PUBLIC PRIVATE PARTNERSHIP IN AFFORDABLE HOUSING**

**DELIVERY IN GHANA**

**GBEVILLAH VITUS BSC**

**A DISSERTATION SUBMITTED TO THE DEPARTMENT OF BUILDING  
TECHNOLOGY IN PARTIAL FULFILMENT FOR THE AWARD OF A  
DEGREE OF MASTER OF SCIENCE IN CONSTRUCTION MANAGEMENT**

**NOVEMBER, 2014**

## DECLARATION

I hereby declare that I have wholly undertaken the research reported herein under supervision.

GBEVILLAH VITUS PG9124113 .....

Student Name, Exam No.

Signature

Date

Certified by:

PROF. E BADU

(Supervisor)

Signature

Date

Certified by:

Prof. Joshua Ayakwa

(Head of Department)

Signature

Date

## DEDICATION

This dissertation is dedicated to my family, my father Mr Culbert Gbevillah, my mother Mrs Sedonia Gbevillah, my brother Ceracus Gbevillah, my sisters Cynthia and Vivan and my wife Eunice B. Maabier.

# KNUST

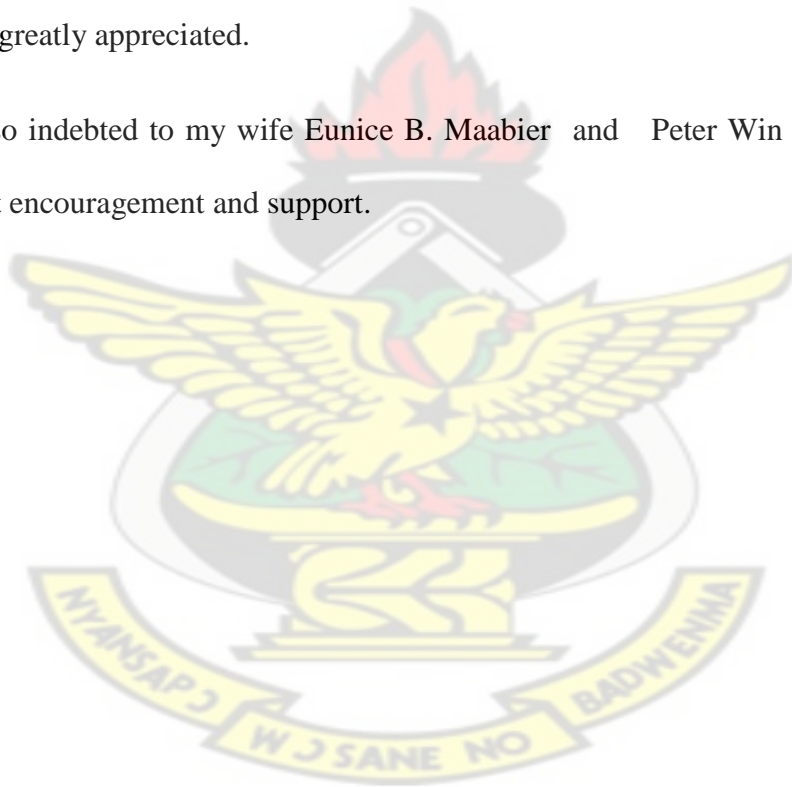


## ACKNOWLEDGEMENT

I would like to express my deepest gratitude to Prof. E. Badu, the Provost. College of Architecture and Planning, KNUST, for the immense assistance offered me and for the supervision of this project work. His in depth knowledge in this area of study and his systematic way of approaching problems, have largely shaped the focus and content of this research.

I want to say thank you to Ernest Kissi, KNUST, for his advice and direction. The special contribution of Mr Aabeyir Raymond and Mr Adesi Micheal to this research work is greatly appreciated.

I am also indebted to my wife Eunice B. Maabier and Peter Win Darcha for their constant encouragement and support.



## ABSTRACT

The concept of Public Private Partnerships (PPPs) has been seen as symbiosis relationships between Public and the Private sector where they combine their strengths, weakness, resources and their expertise for the delivery of a service such as the affordable housing. The need to provide an adequate housing has remained a major priority of every government. The aim of this study was therefore to explore the dynamic of the implementation of PPP in the affordable housing delivery. The specific objectives included: to identify strategies for the implementation of the affordable housing delivery, to identify challenges confronting the PPP in affordable housing delivery and the success factors for the implementation of the affordable housing. The study concentrated on the key players in the housing delivery in Ghana (GREDA, SHC, and SSNIT): Data was collected and analysis using Statistical tools which included: factor analysis (Principal component analysis), Relative Importance Index (RII), correlation analysis and percentages. The findings of the research point out to the fact that: involvement of expert advice and input, risk sharing between partners, collaborating with community in PPP housing scheme were strategies for effective PPP implementation. In addition, politicization of housing issue, inadequate information on PPP programme, lack of sound regulatory framework were some of the challenges of PPP implementation the research revealed. Lastly, the research revealed that effective constant communication between partners, commitment of partners and permanent government involvement were success factor of the PPP implementation. It was concluded that affordable housing problems is a common phenomenon around the world. And it was attributing to a sluggish economic growth in the developing countries such as Ghana. It is therefore recommended that affordable housing delivery should be viewed as national issue

which needs more attention and education on key players in the housing industry. More so the developing country like Ghana should adopt PPP strategies in affordable housing delivery from the developed world where it has been practice and tested.

# KNUST

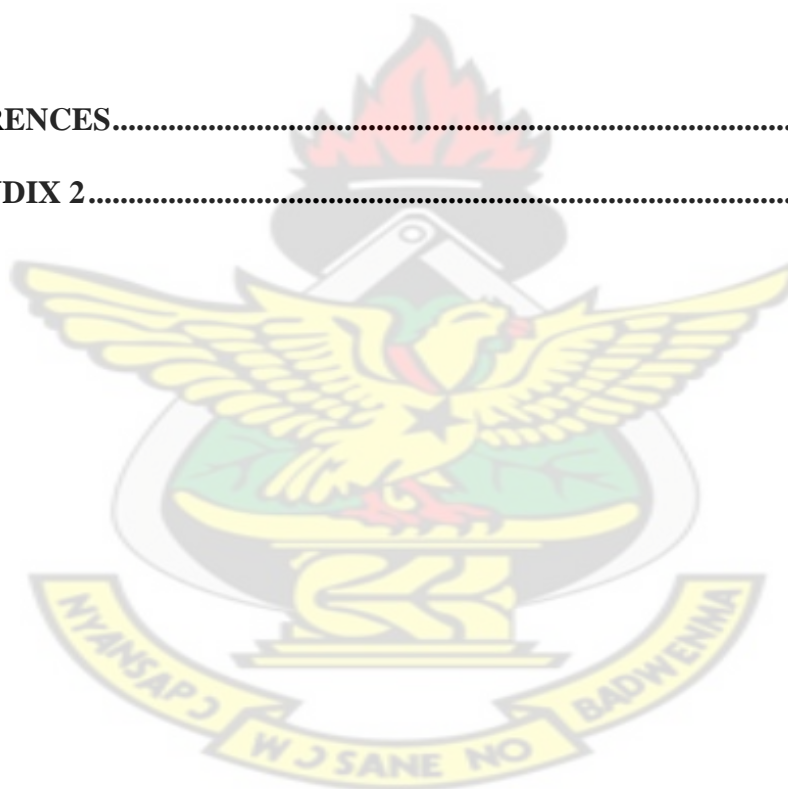


## TABLE OF CONTENT

DECLARATION .....	ii
DEDICATION .....	iii
ACKNOWLEDGEMENT .....	iv
ABSTRACT.....	v
TABLE OF CONTENT .....	vii
LIST OF TABLES .....	x
LIST OF FIGURES .....	xi
 <b>CHAPTER ONE .....</b>	<b>1</b>
<b>INTRODUCTION.....</b>	<b>1</b>
1.1 BACKGROUND TO THE STUDY .....	1
1.2 PROBLEM STATEMENT .....	4
1.3 RESEARCH QUESTION.....	5
1.4 AIM OF STUDY .....	5
1.5 SPECIFIC OBJECTIVES OF THE STUDY.....	5
1.6 SCOPE OF THE STUDY .....	6
1.7 METHODOLOGY OF THE STUDY .....	6
1.8 SIGNIFICANCE OF THE STUDY.....	6
1.9 ORGANISATION OF THE STUDY .....	7
 <b>CHAPTER TWO .....</b>	<b>8</b>
<b>LITERATURE REVIEW .....</b>	<b>8</b>
2.1 INTRODUCTION .....	8
2.2 AN OVERVIEW OF THE HOUSING SITUATION IN GHANA.....	8

2.3 THE CONCEPTUAL DEFINITION OF THE PUBLIC PRIVATE PARTNERSHIP.....	11
2.4 THE CONCEPTUAL DEFINITION OF AFFORDABLE HOUSING .....	13
2.5 THE ROLE OF PUBLIC SECTOR IN THE PUBLIC PRIVATE PARTNERSHIP IN THE AFFORDABLE HOUSING DELIVERY. ....	15
2.6 ROLE OF PRIVATE SECTOR IN THE PUBLIC PRIVATE PARTNERSHIP IN THE AFFORDABLE HOUSING DELIVERY.....	17
2.7 THE PUBLIC PRIVATE PARTNERSHIPS STRATEGIES TO AFFORDABLE PUBLIC SECTOR HOUSING DELIVERY .....	19
2.8 CHALLENGES CONFRONTING THE ADAPTION OF PUBLIC PRIVATE PARTNERSHIPS IN AFFORDABLE HOUSING DELIVERY .....	22
2.9 SUCCESS FACTORS FOR PPP ADAPTION IN HOUSING DELIVERY .....	27
<b>CHAPTER THREE.....</b>	<b>30</b>
<b>RESEACH METHODOLOGY .....</b>	<b>30</b>
3.0 INTRODUCTION .....	30
3.1 RESEARCH STRATEGY, DESIGN AND PROCESS .....	30
3.3 DATA ANALYSIS TECHNIQUES.....	31
<b>CHAPTER FOUR.....</b>	<b>36</b>
<b>ANALYSIS AND DISCUSSION OF RESULTS .....</b>	<b>36</b>
4.0 INTRODUCTION .....	36
4.1 RESPONDENTS' INFORMATION.....	36
4.2 THE EXTENT OF RESPONSE ON EACH OBJECTIVE .....	38
4.3 STRATEGIES FOR THE IMPLEMENTATION OF THE PUBLIC PRIVATE PARTNERSHIPS IN AFFORDABLE HOUSING DELIVERY. ....	38

4.3 CHALLENGES ASSOCIATED WITH PUBLIC PRIVATE PARTNERSHIPS INVOLVING AFFORDABLE HOUSING DELIVERING.....	43
4.4 SUCCESS FACTORS IN THE IMPLEMENTATION OF PUBLIC PRIVATE PARTNERSHIPS IN AFFORDABLE HOUSING DELIVERY .....	49
<b>CHAPTER FIVE .....</b>	<b>55</b>
<b>CONCLUSION AND RECOMENDATIONS.....</b>	<b>55</b>
5.1 INTRODUCTION .....	55
5.4.2 RECOMMENDATION .....	58
<b>REFERENCES.....</b>	<b>60</b>
<b>APPENDIX 2 .....</b>	<b>72</b>



## LIST OF TABLES

Table 1: The Key Players in Housing Delivery Ghana.....	10
Table 4.1: Descriptive Statistics (Strategies) .....	38
Table 4.2: Strategies (Relative Importance Index) .....	39
Table 4.3 Challenges.....	43
Table 4.4 KMO and Bartlett's Test.....	44
Table 4.5 Total Variance Explained .....	45
Table 4.6 Rotated Component Matrix <sup>a</sup> .....	46
Table 4.7: Descriptive Statistics (Success Factors) .....	49
Table 4.8 KMO and Bartlett's Test .....	50
Table 4.9: Total Variance Explained .....	50
Table 4.10: Rotated Component Matrix <sup>a</sup> (Success Factors).....	51
Table 4.11: Correlations (Measuring Tools).....	54

## LIST OF FIGURES

Figures 4.1: Institution of Respondents .....	36
Figure 4.2: Number of years been in the institution .....	37
Figures 4.3: Highest level of qualification.....	37

KNUST



## LIST OF ABBREVIATIONS

BBO.....	Buy, Build and Operate
BF.....	Build-Finance
BLT.....	Build Lease and Transfer
BOO.....	Build-Own-Operate
BRRI.....	Building and Road Research Institute
BOT.....	Build- Operate and Transfer
DB.....	Design and Build
DBO.....	Design Build and Operate
DBFMO.....	Design-Build-Finance-Maintain-Operate
DBFO/M.....	Design, Build, Finance and Operate/Maintain
DBFO.....	Design-Build-Finance-Operate
GDP.....	Gross Domestic Product
GNA.....	Ghana New Agency
GREDA.....	Ghana Real Estate Developers Association
HND.....	Higher National Diploma
KMA .....	Kumasi Metropolitan Assemble
OMC.....	Operation and Maintenance Contract
PPP .....	Public Private Partnership
NGO.....	Non Governmental Organization
NATAG.....	National Tenants Association of Ghana
SAP.....	Structural Adjustment Program
SHC.....	State Housing Corporation
SPSS.....	Statistical Packages for Social Sciences
SSNIT.....	Social Security and Nation Insurance Trust
TDC.....	Tema Development Corporation

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

The demand for affordable housing has increased as houses prices have risen faster than the incomes of many housing consumers whose incomes fall in the lower bands of national income distributions. Now in many countries, there is evidence of a sizeable gap existing between the typical price of housing that is produced or traded in the housing market and an indicative price that is deemed affordable to lower-income households (Milligan and Gilmour, 2012). The underlying rationale for affordable housing strategies is to promote, produce, and protect appropriate housing that is affordable to households who face problems obtaining or sustaining housing in the market. The world is facing a global housing crisis especially in cities around the world, with almost one billion people living in substandard housing without clean water or adequate sanitation ( Kissick *et al.*, 2006).

Housing is a key component in human development (Gidding, 2007). and housing is not only a desirable goal in its own right, but it contributes to economic growth, social development, improved governance and enhance security and stability (Gidding, 2007). Housing is very important in any economy and provides core security to families, societies, neighbourhoods and communities, it has been a fundamental human right which forms one of the three basic needs of human existence i.e. food, shelter and clothing (Tweneboa, 2011). Sub-Saharan Africa is undergoing profound demographic changes. People are moving to the cities at unprecedented rates, and Africa will be more urban than rural by 2030 (Gidding, 2007). Housing is a policy priority in neighborhood improvement initiatives because it can play a role in at least

four broad areas of people's lives: the physical, financial, locational/spatial, and psychological/social. The physical dimension includes the quality of the domestic environment, the condition and size of the home, number of bedrooms, and design features. Adequate physical features facilitate good health and educational outcomes (Carter, 2012). Housing is a vital issue in government policy in Ghana in the early 21<sup>st</sup> century but its direction awaits the acceptance of the current draft of housing policy. Compare with many countries in Sub-Saharan Africa, Ghana urban population is very poorly housed. About sixty per cent of all urban households occupy single room (UN-HABITAT, 2011).

According to Bank of Ghana, (2007) the 1960-65 National Development Plan, provision of housing was central as two main state bodies were formed to address housing issues: the State Housing Corporation (SHC) and the Tema Development Corporation (TDC) according to Government of Ghana Ministry of Finance and Economics Planning, (2011). Public Private Partnerships is a contractual agreement between a public entity and private sector party, with clear agreement on share objectives for the provision of public infrastructure and services traditionally provided by the public sector. Normally with the public private partnerships arrangement, the private sector forms part of all government's service delivering functions, and assume the associated risks for some time for a significant period of time. In return the private sector received a benefit or financial remuneration.

Partnerships occur when two or more organization or people agree to work together to achieve shared or complementary goal such as achieving affordable housing objective. Partnerships can take many forms: it can be based on joint investment or resources, such as time, expertise, information, development site, equipment. It can

equally base on risk taking and benefit sharing; Affordability of housing encompasses not only the static structure called the house but the entire spectrum of the environmental factors that makes living acceptable and conformable. Amount them are good accesses routes, ventilation, sanitation and access to human basic need such as water. Housing affordability therefore involves the ability of households to consume other basic necessities of life such as food and clothing in addition to accessing adequate housing. The benefit of quality affordable housing to every nation is extremely massive; it impacts on the economic, socio cultural and political life of people; it provides shelter for sleep; serve as a shield against elements of the weather and other hazards (Boamah, 2010).

Housing affordability is complex in the detail, but simple conceptually. It costs too much and takes too long for an individual to build a house in Ghana. Land has been made artificially scarce and constrain by land owners who put impediment title of land (Bertuat, 2013) or shared responsibility and authority (Austing, 2008). Strategies may also be designed to achieve additional supplementary objectives, for example, to promote more affordable housing in locations where there are labour market shortages or to increase social mix in desirable neighborhoods that can offer more economic and social opportunities (especially jobs and services) to households, who may be disadvantaged by living in other more affordable but less well-endowed locations. In relation to government priorities, there has been a widespread trend in recent decades to adopt policies that achieve goals for affordable housing through enabling ‘affordable’ forms of market-based homeownership, although policies in favour of rental housing and innovative tenures have re-emerged in the first decade of the twenty-first century.

In response to this, there is the urgent need to identify contemporary affordable housing strategies employable to engage actors and institutions across the public, private, and not-for-profit sectors of Ghana. This research provides an overview of the changing approach to financing and delivering affordable housing that has emerged in recent decades with greater attention given to the role of public-private cooperation in Ghana.

## 1.2 Problem Statement

The government of Ghana is facing monumental challenges in providing affordable houses to her citizens all over the country, especially those in the major cities such as Kumasi metropolitan area. The public sector which has the mandate of providing affordable houses is overwhelmed by the growth of the Ghanaian urban population resulting in a huge housing deficit in the cities. The provision of affordable public housing infrastructure is normally viewed as the responsibility of the Government of Ghana, but due to the limited budget and financial resources, the huge houses deficit cannot be met by the public sector alone (Ministry of Finance and Economics Planning, 2011). Though the private sector has continuously completed the effort of government agencies, it is also constrain in the following areas: lack of policy instrument (regulatory and planning), fiscal policy, financial and institutional, (Tsenkova and Witwer, 2011). The Delivery of housing in Ghana has been constrained by: unstable macroeconomic environment; high inflation; high cost of borrowing; problematic land administration and titling problems; and lack of both construction finance and mortgage finance (Tweneboa, 2011) which thwart the effort of the private sector in providing affordable housing. The housing problems in the cities point out the fact neither the government nor the private sector alone can

surmount the problem. There is therefore the need to consider a partnership between the two major players in the housing sector: public-private partnership. It is against this background this research was conducted to look at the possibility of solving the housing problems through the public-private partnership.

### **1.3 Aim of Study**

The aim of this study was to explore the dynamics for the implementation of the public private partnerships in the affordable housing delivery in order to scale down the mounting housing deficit in Ghana.

### **1.4 Specific Objectives of the Study**

In order to attain the above stated aim, the following specific objectives were advanced for the conduct of the study:

1. To identify the strategies for implementation the public private partnerships in affordable housing delivery;
2. To identify the challenges of public private partnerships involving affordable housing delivering; and
3. To identify the success Factors for adaption public private partnerships in affordable housing delivery.

### **1.5 Research Question**

1. What are the strategies adopted by public private partnerships in affordable housing delivering?
2. What are the challenges facing the public private partnerships in affordable housing delivering?

3. What will be the successful Factors for the adoption of public private partnerships in affordable housing delivering?

### **1.6 Scope of the Study**

The study was restricted to affordable housing delivering by using public private partnerships. It looks at the strategies the public private partnerships can adopt for the delivering of affordable houses. Geographically, the study covered Kumasi Metropolitan areas.

### **1.7 Methodology of the Study**

The quantitative approach was adopted for this study. This was to help cover a wide range of respondents in the gathering of their opinions. The extensive review of literature was conducted on the delivering of affordable housing. Generally journals, constructions books, the internet, previous research. Survey questionnaires were utilized as the main instrument for data collection. The collected data was analyzed using various form of statistical tool such as factor analysis, and Relative Important Index RII.

### **1.8 Significance of the Study**

The finding of this study when adopted will enhance the delivering of affordable houses. Because of the involvement of public Private partnerships it will reduce government budget for housing provision .This Surplus budget achieve as public private partnerships infusion in housing delivering in Ghana will be used to develop other critical sector of the economy to enhance GDP growth. It will also improve the

planning of physical environment in Ghana which will subsequently reduce the emergence of the slum.

## **1.9 Organisation of the Study**

The study consisted of five chapters; they are introduction, review of relevant Literature, research method, analysis or data presentation and conclusions and recommendation. Chapter one (1) began with background and introduction to the study, Then, problem statement, research question, aim of study, specific objectives of the study, scope of the study, methodology of the study, significance of the study and organization of the study, the chapter 2 made up of overview of the housing situation in Ghana, the conceptual definition of the public private partnership, the conceptual definition of affordable housing, the role of public sector in the public private partnership in the affordable housing delivery, role of private sector in the public private partnership in the affordable housing delivery, the public private partnerships strategies to affordable public sector housing delivery, challenges confronting the adaption of public private partnerships in affordable housing delivery, and success factors for PPP adaption in housing delivery.

The chapter 3 consisted with research strategy, design and process, survey frame, sampling and sample size determination, and data analysis techniques. The chapter 4 dealt with the extent of response on each objective, identifying the strategies for the adaption of the public private partnerships in affordable housing delivery, identifying the challenges with public private partnerships involving affordable housing delivering, The chapter 5 made up with conclusion and recommendation.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter is a review of literature on the topic under consideration. It takes the following format: An Overview of the housing situation in Ghana, The conceptual definition of the Public Private partnership, The conceptual definition of affordable houses, The role of public sector in affordable Housing delivery, Role of private sector in affordable housing delivery, Strategies for PPP adaption in public sector housing, Challenges Confronting the adaption of PPP in affordable housing delivery, Success Factors for PPP adaption in housing delivery.

#### **2.2 An Overview of the Housing Situation in Ghana**

Housing delivery in Ghana has witnessed fragmented and sustained effort from individuals, private developers and successive governments. This situation has contributed to the huge housing deficit Ghanaians encounter today. The shortage of housing continues to be one of the most critical socio-economic challenges facing the country (Ansah, 2014). The 2010 Population and Housing Census indicates that Ghana is facing an acute housing problem with housing deficit of over 1.5 million units in 2000 and over 2 million in 2010. The increasing housing delivery deficit is due to the high population growth rate, urbanization and less supply of housing units to meet the growing demand for housing. (Ansah, 2014).

The Bank of Ghana (2007) in comparing the housing situation in Ghana with other advanced countries, Ghana 'shousing industry is at a rudimentary stage. High property prices particularly in the urban centres such as Accra, Tema, Kumasi and

Takoradi fuelled by a rapidly growing middle-class, as well as rapid and uncontrollable urbanization have turned the housing industry in the country into one of the critical developmental issues facing the country. According to the GNA (2014), President Mahama said statistics available indicates that growth rate of Ghana's population could lead to 63% of the population moving into the urban areas by 2050, hence the need to increase housing projects to accommodate them.

According to President Mahama government is ready to partner the private sector under the Public-Private Partnership programme to build more housing units in the coming years throughout the country, to make it easier for individuals to purchase them and pay by installments. However, NATAG (2012), arguments seem to justify politicians' involvement in housing issue. NATAG feel disappointed and betrayed by politicians for politicizing matters concerning housing. As Ghana's housing deficit hit 1.6 million and expected to double by the next 10 years. Currently, the country needs 360,000 housing unit a year for ten years as a country in order to flatten our rocketing housing deficit which is expected to reach 3.6 million by the year 2022 if the current trend of providing housing in the country continues.

NATAG still argues that, the Structural Adjustment Program (SAP) implemented by government at the beginning of 1986 marked the genesis of the country choosing to default in providing affordable housing to Ghanaians. As it were, the introduction of the SAP, subjected the country to trade liberalization which opened Ghana market to importing building materials at a higher cost which served as disincentive for many Ghanaians to own houses. This killer policy led to the abandonment of the State Housing Corporation (SHC) and the Tema Development Corporation, which used to provide affordable housing to the Ghanaian poor and public workers.

Tweneboa (2011), on the other hand noted that Ghana like many sub-Saharan countries face an acute housing deficit and attributed the housing deficit to rapid population growth and a high rate of urbanisation which have made housing one of the most critical issues facing the country today. According Tweneboa there is a high desire for home ownership by most Ghanaians, but due to high lending rates, low income levels and relatively high house prices this dream has been elusive for these prospective homeowners.

Tweneboa added that the Building and Road Research Institute (BRRI) of Ghana study on Annual Housing output indicated a total of 40,000 housing units for a country that requires 120,000 per annum of these 40,000 about 38,200 units representing 95.5% of the estimated annual output were supplied by individuals. The next largest contributor was GREDA with 750 units representing 1.9% while district Assemblies followed with 470 housing units 1.2%. Recent figures estimate a shortfall of approximately 1million – 1.8 million housing units in Ghana at approximately \$25,000 each for “affordable” housing, means \$25 billion to \$45 billion.

Table 2.1: The Key Players in Housing Delivery Ghana

KEY PLAYERS IN HOUSING DELIVERY	HOUSING DELIVERY IN UNITS	PERCENTAGE
Private	47,200	94.40
Individual	620	1.24
District Assemblies	340	0.68
MDAS	120	0.24
INGO'S	50	0.10
TDC	70	0.14
SHC	1,500	3.00
GREDA (Other developers)	100	0.20
TOTAL	50,000	100

Source Tweneboa (2011).

The rapid increases in population and urbanization, and the inability of the housing delivery system to meet the growing effective demand over the years has created strains in the existing housing stock and infrastructure, especially in the urban areas. This has resulted in overcrowding and development of slums in many places. Available estimates show that urban population has increased from 28.9% in 1970 to 43.8% in 2000. On the other hand population with access to secure housing has stagnated at about 12% over the past five years and if the trend continues, the proportion with access to secure housing will increase by only 6% by 2020. This means that significant proportion of urban population will remain without access to secure housing. Ghana Millennium Development goals report (2010)). Similarly, Boadu article in Daily Graphic on 31<sup>st</sup> July, 2014 p 40/41 also added that, Ghana's Housing deficit could be as well be estimate at 1.7 million.

The annual housing requirement put the total figure at 150,000 but delivery is just about 50,000. It is attributed that the fundamental challenges has been the funding, rapid urbanization and rising cost. It is further noted that the situation will be compounded with the introduction of a 17.5 percent Value Added Tax on estate development, as the rising inflation and interest rates all have negative on the cost of housing.

### **2.3 The Conceptual Definition of the Public Private Partnership**

The concept of public private partnerships has attracted worldwide attention and acquired a new resonance in the context of developing countries. Public Private Partnerships are increasingly heralded as an innovative policy tool for remedying the lack of dynamism in traditional public service delivery (Jamali, 2004). The definition

of PPP is critical and relevant to the success of any Public Private Partnerships venture as the objectives of the PPP vary from country to country. This is clear from the fact that there is no universal definition of Public Private Partnerships as different countries may have different models. For instance, the Canadian Council for Public Private Partnerships defines Public Private Partnerships as a cooperative venture between the public and private sectors, built on the expertise of each partner that best meets clearly defined public needs through the appropriate allocation of resources, risks and rewards (Hong Kong Institute of Surveyors, 2009).

Hans *et al.* (2009), in the other hand view public Private partnerships as a wide range of arrangements whereby government responsibilities are outsourced to commercial partners and risk is shared between the public and private sectors to bring about desired outcomes in areas associated with public policy.

The 2011 National Policy on Public Private Partnerships in Ghana defines public private partnerships as a contractual arrangement between a public entity and private sector party with clear agreement on a shared objective for the provision of public infrastructure and service traditionally provided by public sector. Usually, in the public private partnerships arrangement, the private sector party performance part or all the of a government service delivery function and assume the association risk for a significance period of time in return the private sector party receives benefit or financial remuneration according to predefined performance criteria which may be derived.

The Ministry of Foreign Affairs of the Netherland (2013), also held a their view of the definition of public private partnership they look at it as a generically form of cooperation between government and business agents – sometimes also involving voluntary organizations (NGOs, trade unions) or knowledge institutes – that agree to

work together to reach a common goals or carry out a specific task, while jointly assuming the risks and responsibilities and sharing resources and competences. While Abhilasha (2014), emphasized that, Public Private Partnership means an arrangement between a government, statutory entity , government owned entity on one side and a private sector entity on the other, for the provision of public assets and/or public services, through investments being made and/or management being undertaken by the private sector entity, for a specified period of time, where there is well defined allocation of risk between the private sector and the public entity and the private entity receives performance linked payments that conform or are benchmarked to specified and pre-determined performance standards, measurable by the public entity or its representative. With the above definition it is clear that sharing of risks is paramount which I may not like to association myself so much to the definition of National Policy on Public Private Partnerships in Ghana, because if the private sector assume the associated risks, the private sector will intend want to maximize profit there by defeating the purpose of achieving my affordability objectives. I will actually go with the Canadian Council for Public Private Partnerships definitions for the fact that they risks have to be shared appropriately

#### **2.4 The Conceptual Definition of Affordable Housing**

Affordable housing is a foremost economic, political and social issue in a developing country like Ghana. It is therefore not surprising that quality affordable housing is cardinal to all households and the economic development pursuit of nations (Boamah, 2010). Housing affordability therefore involves the ability of households to consume other basic necessities of life such as food and clothing in addition to accessing adequate housing. It includes the ability of households to consume housing that

permits reasonable standard of living, ability of mortgagors to effectively meet mortgage obligations, and households' access to adequate standard of housing without denying them access to other basic necessities of life (Boamah, 2010). Rosten (2009) explain that, houses are affordable when the occupants/family spends not more than 30% of their income to live there.

While KPMG (2010), argue that, when it comes to the definition of affordable housing and its concept it is very generic and could have different meanings for different people based on differences in income levels. KPMG (2010), however, define affordable housing as any housing that meets some form of affordability criterion. They said that, different countries have defined affordable housing to present the economic potential of an individual buying a house. For instance United States and Canada, a commonly accepted guideline for affordable housing is that the cost of housing should not be more than 30 percent of a household's gross income. Housing costs include taxes and insurance for owners, and utility costs. If the monthly carrying costs of a home exceed 30–35 percent of household income, the housing is considered unaffordable for that household.

According to Arthur *et al.*, (2002), Housing affordability is more difficult to define. Generally, it involves the capacity of households to consume housing services; specifically it involves the relationship between household incomes and housing prices and rents. An often-quoted rule of thumb is that households should spend no more than 30 percent of their income on housing, unless they choose to do so. Measuring housing affordability is thus complicated by the inability to determine whether households spend more than 30 percent of their income on housing by necessity or by choice. Other measurement problems involve the definition of income (whether permanent or transitory, liquid or illiquid, personal or household) and the

definition of housing expenditure whether voluntary or involuntary, total or per unit of housing services, nominal or real rents, mortgage payments or down payments.

## **2.5 The Role of Public Sector in the Public Private Partnership in the Affordable Housing Delivery**

The Ministry of Finance Singapore (2004), described the Public Private Partnerships as collaboration between various types of private sector companies and the public agency. The Public Private Partnerships deal should be structured to be mutually beneficial to all the parties involved, with each party taking on the responsibilities which it is best able to manage. The roles of the public sector are: To Purchaser of services, as the purchaser of services, the public sector will specify the outcomes/outputs that it requires and avoid specifying the means of the delivering the services, to engage consultants such as technical, legal, financial to help them structure the public partnerships arrangement and work out the viability of it, to formulates the Public Private Partnerships policies, taking into account the feedback from the private sector player.

Davies and Kathryn (2005), presents a sound argument about the role of the public sector in affordable housing delivery. They argue that, the public sector have to procure assets, not services, from the private sector. The public sector carries out design prior to procurement, the private sector is responsible for delivering assets, not for their long-term performance beyond standard warranty periods, the project management of procurement typically remain with the public sector, including the risk of successfully integrating multiple works contracts, capital and operating costs are paid for by the public sector, who take the risk of cost overruns and late delivery. It is the public sector who concentrates on defining the objectives to be attained. In

order to enjoy the benefits of Public Private Partnerships in affordable housing delivery, the public sector procuring authority must have, or be able to develop, the requisite capability to assess and deliver value for money, both at the initial stage when considering how particular services should be procured and formulating project specifications, and also during the bidding.

Public Private Infrastructure Advisory Facility (2012) further added that the public sector may make further contributions, such as: providing or enabling access to land; contributing existing assets; or providing debt or equity finance to cover capital expenditures. The public sector may also provide various forms of guarantee that enable risk to be shared effectively between the public and the private sector. Jamali (2004), pointed out that one of the major roles of the public sector is to control several key legal and regulatory assets to implement a project within the context of an overall development program. Eziyi and Egidario (2012), noted that, the role of the public sector in affordable housing provision include: provision of land at subsidized cost, provision of access roads and power supply, setting of targets, play supervision and monitoring roles, setting standard and ensuring compliance, Provision of legal and economic policy frameworks, creation of awareness on the projects and marketing of completed housing units.

While Young et al. (2009) infer that other researchers have clarified the roles of the public sector in facilitating public private partnerships in affordable housing delivery. Five main roles of the public sector can be concluded as follows: to create favorable investment environment, to establish adequate legal/regulatory frameworks, to establish a coordinating and supportive authority, to select a suitable concessionaire, and to be actively involved in project life-cycle phases.

## **2.6 Role of Private Sector in the Public Private Partnership in the Affordable Housing Delivery**

There is considerable evidence that when the public sector procures capital projects those projects often incur significant delays in completion and delivery and incur material cost and overrun, especially when the projects are large and complex (The Canadian Council for Public Private Partnerships, 2011). The problems of the delay and cost overruns on traditional public sector procurement have occurred consistently in jurisdiction across the world and where two of the key drivers that caused the public sector to look at new methods of procuring infrastructure and service. Governments around the world have turned to the collaboration with the private sector because they offer a framework that imposes discipline to help control that Factors leading to cost overruns and the delivery delays under traditional procurement (The Canadian Council for Public Private Partnerships, 2011).

Generally, the private sector played specific roles in the Public Private Partnerships in affordable housing delivery. They are basically involved in project viability studies, the design and provide funds for the implementation of the affordable housing and the provision of basic amenities, when such amenities were not provided by the government. Independent building contractors will be also engaged by private developers for the construction of the affordable housing. To ensure that there is a margin of profit for the partners, the marketing of completed housing will be a joint responsibility of the partners, especially in the joint venture affordable housing delivery. The sharing of the accrued profits will be according to the percentages of equity holdings of the partners, as negotiated and indicated (Eziyi, 2010). The main argument for private sector role in Public Private Partnerships in affordable housing delivery and operation is that significant efficiencies can be driven by the profit

motive, integration of whole life responsibility and exposure to competition. The private sector can: Identify and manage risks and costs, provide specialist management and technical skills, manage whole of life risks from design responsibility through to hand back to public sector, coordinate capital costs with whole-of-life operating costs, improve the efficiency and quality of services, assess market needs and capacity, raise financing etc. (Ernest and Young, 2013). The other areas of the private sector role in public private partnerships suggested by Public Private Infrastructure Advisory Facility (2012), the private sector has to provides or contributes to the provision of a public service, the private sector must generally make an investment in the venture, even if it is limited, e.g., to working capital. The government of Ghana Ministry of Finance and Economic Planning (2011) pointed out that the role of the private sector in the affordable housing delivery is to deliver effectively the affordable housing and facilities required by the public sector and consumers at the project level. Usually in Public Private Partnership's arrangement, the private sector party provides the design, construction, operation, management, maintenance and financing for the partnerships project and is paid according to performance. Risk are share identified and replaced with the party best able to bear and management them at low cost.

The private sector brings outside capital, technical expertise and an incentive structure (Jamali, 2004). The role of the private sector in affordable housing provision come in various form which include: Payment for cost of land and other sundry charges, comply with building and planning regulations in the design and construction of the projects, undertake the design and physical construction of housing units, funding of the construction work of the housing projects, creating awareness(advertising) on the projects, marketing and allocation of completed

housing, management of housing estates agreed charges on residents, Set the prices of housing units.

## **2.7 The Public Private Partnerships Strategies to Affordable Public Sector Housing Delivery**

Several sound arguments presented in literature support the role of Public Private Partnership's in the provision of affordable housing. Advocates often point to the financial benefits of partnerships. Boase (2000:) cited in Moskalyk, (2008), classifies four types of public private partnerships strategies that illustrate the possible power-sharing and decision- making arrangements. First, there are formalized *consultative public private partnerships* arrangements under which governments simply seek out expert advice and input from private sector or community groups. *Contributory* public private partnerships are identified as ones where the public sector provides funding or sponsors an organization (private or non-profit) that is then responsible for carrying out the development and management of the affordable housing.

There are also *community development* public private partnerships arrangements where both the public and private sectors jointly contribute and work together to achieve a common goal. Lastly, a *collaborative*, which is a form of public private partnerships where both the private and public sectors agree to share the risks and rewards of the project and the responsibility of decision-making, is joint, albeit not always equal. Meanwhile, UN-HABITAT (2011), emphasize on the strategies below:

- **Design-Build:** The private sector designs and builds infrastructure to meet public sector performance specifications, often for a fixed price, so the risk of cost

overruns is transferred to the private sector. (Many do not consider Design-Build Models to be within the spectrum of PPPs);

- Finance only: A private entity, usually a financial service industry, funds a project directly or uses various mechanisms such as long-term lease or bond issues;
- Operation and Maintenance Contract (OMC): A private operator, under contract, operates a publicly-owned asset for a specified term. Ownership of the asset remains with the public entity;
- Build-Finance (BF): The private sector constructs an asset and finances the capital cost only during the construction period;
- Design-Build-Finance-Operate (DBFO): The private sector designs, builds and finances an asset and provides hard facility management or maintenance services under a long term agreement.
- Design-Build-Finance-Maintain-Operate (DBFMO): The private sector designs, builds and finances an asset, provides hard and/or soft facility management services as well as operates under a long-term agreement and
- Build-Own-Operate (BOO): The private sector finances, builds, owns and operates a facility or service in perpetuity. The public constraints are stated in the original agreement and throughout on-going regulatory authority.

**Concession:** A private sector concessionaire under takes investments and operates the facility for a fixed period of time after which the ownerships reverts back to the public sector. Similarly, The United Republic Of Tanzania (2009), also emphasized on the following strategies: Design and Build (DB), Design Build and Operate (DBO), Build, Operate and Transfer (BOT), Build, Lease and Transfer (BLT), Design, Build, Finance and Operate/Maintain (DBFO/M), Build, Own and Operate (BOO), and Buy,

Build and Operate (BBO). **Unsolicited Bids:** These are bids for which a private entity or an individual identifies and submits a proposal to the competent authority. The proposal is examined using defined criteria and if it qualifies it is designated as a PPP. Such bids emanate from the fact that potential PPPs may not always be known and tendered to the public for submission of bids, **Solicited Bids:** These are bids for which a competent authority identifies for private participation and announces a request for proposal, leading to the selection of the successful bidder. Hans et al; (2009), identified the following strategies that contribute to the successful implementation of public private partnerships; formal privatization, it means that public tasks are bundled and outsourced to a legally privatized enterprise which remains nevertheless 100% state-owned,

- **Material Privatization:** It refers to the permanent transfer of former public tasks, including property rights of the infrastructure asset.
- **Functional Privatization:** It refers to the transfer of former public tasks to a private partner for a certain period of time. According to the report of the National PPP implementation of Strategies of Tanzania (2012), the strategies of PPP implementation include:
  - The development of operational guidelines and tools for the assessment and structuring of PPP projects;
  - The building of PPP project development and management capacity within the partners;
  - The removal of any regulatory obstacles that hinder the use of PPP or that increase the costs of PPP arrangements and
  - The launching of a small number of PPP pilot projects, in order to perform a real world test of the new PPP strategies.

Austin (2008) identifies four key drivers of strategies of PPP adaption that needed to tackle include:

(1) Identifies potential financial institution, thus a potential source of grant and loan on favorable terms. Potential opportunists for affordable housing to be linked to existing social and economic strategies.

(2) Identify potential sites that could made available on a reduce cost. That is exploring financial and management options for the most effective way of achieving affordable housing at site.

(3) Identify development companies that are interested in the challenges and opportunities that affordable housing might bring. And (4) identify the partner's different level of expertise. For example some partners may have an excellent understand of the housing needs but less experience of legal and financial matters.

## **2.8 Challenges Confronting the Adaption of Public Private Partnerships in Affordable Housing Delivery**

It is well-documented that globally, both the private and public sectors are embracing partnerships for the provision of affordable housing. However, when applying the public private partnerships approach to the urban sector to try and meet the needs of the rise in population; governments around the world are facing a range of challenges (UN-HABITAT, 2011). While the scale and scope of these challenges vary depending on the country's level of understanding and development in using the partnership model, this section provides an overview of some of the most common public private partnerships challenges facing governments today. Some of the challenges confronting the public private partnerships include: different goal; ordinarily, the

goals of the private sector fundamentally oppose those of the public sector: the former focuses on economic gain while the latter strives to protect the public interest through regulation and minimization of risk. If left unmanaged, these disparate goals of the two sectors can cause friction and mistrust between the partners. Public Acceptability, There may be considerable resistance to private sector participation in the provision of urban development, particularly for more traditional public urban services such as affordable housing.

Financing Challenges, The global financial crisis has drastically changed the financial landscape for urban all a public private partnerships round the world strict credit conditions have made banks and investors increasingly cautious, (UN-HABITAT, 2011). According to Ernest and Young (2012), the government of India faces a lot of challenges in implementation of the public private partnerships program for infrastructure development which has a similarity with the Ghanaian concept:

- Regularly environment- there is no independent public private partnerships regulator as of now. In order to attract more domestic and international private funding of the infrastructure, more robust regulatory environment with and independent regulator is essential.
- Lack of information-the public private partnerships program lacks a comprehensive database regarding the project/studies to be awarded under the public private partnerships. An online database, consisting of all the project document including feasibility reports, concession agreement and status of various clearance a land acquisition, will be helpful to the bidders.
- Project Development- the project development activities such as detail feasibility study and acquisition, environment /forest clearance, are not given adequate

project importance by the concession authorities leads to reduction interest by the private sector. Mispricing and many times delays at the time of execution.

- Lack of institutional capacity- the institutional capacity to undertake large and complex projects at various central ministries and especially at state and local bodies' level hinder the transportation target project.
- Financial availability -The private sector is dependent upon commercial banks to raise debt for the public private partnerships project. With commercial banks reaching the sectorial exposure limits and large India infrastructure companies being highly leveraged funding the public private partnership project.

The Tanzania National Public Private Partnerships Policy (2009) also added that, the private sector participation in areas previously treated as prerogatives of public sector has been of significant boost in many countries. While Tanzania is contemplating to utilize this avenue it has been faced with the following challenges:-

- Lack of comprehensive policy, legal and institutional frameworks that provide clear guidelines and procedures for development and implementation of public private partnerships;
- Lack of analysis capacity to assess investment proposals leading to poor project designs and implementation;
- Inadequate enabling environment which includes lack of long-term financing instruments and appropriate risk sharing mechanisms;
- Insufficient capacity in negotiations, procurement, implementation and management of public private partnerships;
- Inadequate risk sharing mechanisms that often lead to the public sector carrying the full burden of risks;

- Inadequate mechanisms for recovery of private investors' capital as well as impact on national development programmes that depend on the project's performance and
- Lack of public awareness about public private partnerships and their benefits.

The Boston Consulting Group (2013), restricted control & flexibility - Governments are sometimes unwilling to share control of infrastructure due to the inflexibility to influence future system design and operations, particularly with regard to national interests, social objectives and integration with other facilities. Transaction & monitoring time and costs-The indirect and direct costs of management time and advice from experts in the preparation, procurement and monitoring of PPPs can be very high – yet are often unavoidable. As these expenses are largely fixed, PPPs are only cost-effective above a certain project size. Regulatory failures- The design of regulatory regimes is sometimes sub-optimal, or the originally conceived regulation is gamed by special interest lobbying ("regulatory capture"), Private operators might have insufficient incentives to regard safety, equity, community and environmental considerations, raising the risk of market failure if no adequate regulations for internalizing these issues have been stipulated. Incomplete contracts - Even the best PPP contract cannot foresee all circumstances that may arise over concession duration of multiple decades. Thus, the need to amend the contract can entail lengthy and expensive renegotiations between the partners. Public budget risks- If a PPP uses availability payments and is over-dimensioned, this may lead to excessively high future government payments – and possibly costly renegotiations, In some cases, politicians have excessively used PPPs with availability payments, effectively moving public obligations into the future and off the government's balance sheet with a resulting large contingent liability to the public budget .Jamali (2004), highlights one

of the key challenge inherent in public private partnerships arrangements arisen from the notion of building new relationships between actors that have completely different constituencies/interests, along with divergent strategic and operational realities. Erik and Geert (2002), line of argument of these challenges attribute to the actors involved, who are likely to have different objectives, a variety of perceptions and contrasting background; all these differences make cooperation difficult, when decisions are taken in separate arenas in various networks and the various institutional backgrounds.

Sometime the public private partnerships project (affordable housing) can be saddle with challenges which can it delay or possible termination. Some of these challenges may include the wide gaps and level of expectations between public and private sector, wide gaps and level of expectations between public and private sector making and lack of clear government objectives and commitment. Poorly defined sector policies and inadequate legal regulatory frameworks couple with lack of mechanisms to attract long-term finance from private sources at affordable rates, poor risk management, and low credibility of government policies, inadequate domestic capital markets, poor transparency; and lack of competition. Ademiluyi (2010), look at the challenges with PPP in affordable housing delivery in Nigeria which is largely similar to that of Ghana as:

- Problem of plan implementation: There is often a wide gap between what is on paper and what is happening on the ground;
- Lack of adequate data relating to the magnitude of the problem: due partly to the absence of the due partly to the absence of the national data bank on housing;

- Inconsistency in government policies and programs: frequent changes of policies with changes of government and without proper assessment of the existing ones;
- Lack of efficient and sustainable credit delivery to the housing sector;
- The rapid annual growth rate of the Nigerian population;
- Lack of effective coordination among Housing Agencies: While all the three tiers of the government are involved in one way or the other in housing matters, their activities are hardly coordinated and
- Politicization of housing issues: government involvement.

## **2.9 Success factors for PPP adaption in housing delivery**

The worldwide experience has shown that the PPP, if properly formulated, can provide a variety of success Factors to the government: PPP can increase the “value for money” spent for infrastructure services by providing more-efficient, lower-cost, and reliable services, a PPP helps keep public sector budgets, and especially budget deficiencies, down, PPP allow the public sector to avoid up-front capital costs and reduce public sector administration costs, the project life-cycle costs and project delivery time can be reduced by using a PPP, PPP can improve the quality and efficiency of infrastructure services, PPP facilitates innovation in infrastructure development, (Young et al; 2009).

Jamali (2004) emphasizes that, public private partnerships can provide a mechanism for exploiting the comparative advantages of public and private sectors in mutually supportive ways and Partnerships appear to be most justified where: traditional ways of working independently have a limited impact on a problem. Jamali (2004) outline the following success Factors of the PPP in affordable housing delivery. There must

be a Permanent government involvement, a sound regulatory framework, Fulfillment of key formation requirements, compatibility, capability, commitment and control in partner selection, a common vision and trusty relationship between partners, Ensure that the multiple interests of key participants are skillfully negotiated and packaged.

However, UN-HABITAT (2011), also added that, public private partnerships lead to delivering on-time, enhancing public management, improved levels of service, increased availability of Infrastructure funds, mitigating risk. Hans et al.(2009), reiterate that for the successful implementation of public private partnerships amount others things these Factors have to be considered: Government total support, proper project financing strategy, good information dissemination and communication system, continuous project monitoring and control, good system for contractor selection, Compelling managerial capabilities, experienced human resources, no political pressure and interference, community participation and support, equality and balance in terms of rights and responsibilities, proper planning in infrastructure network development.

In addition to that the Department of Urban studies and planning (2012), in Massachusetts Institute of Technology identified the following success Factors: there is should be the development of Mortgage finance, development of property right, regulating land and housing development, development a policy and institutional framework, organize the building society. Still on success Factors, Abdul and Kassim (2010), also noted that Consistent monitoring, Robust and clear agreement, Constant communication, developer's profit-sharing accountability, developer's social accountability, compatibility between partners, realistic projection competition, Ample time to evaluate proposal, political influence. Further evidences according to Eziyi(2010), assessing some of the Factors that can lead to success in PPP include, the

strong and competent third sector organizations for community mobilization and mediatory functions, public sector assistance in the supply of land and entrenchment of the principle of popular participation. The same vine, the presence of favorable macro-level economic, political and socio cultural climates, the availability of potentials for cost recovery and the margin of profit for private sector partners as well as the identification of shared objectives in the PPPs have all contributed to the success of PPP housing projects in various countries.

Cheung et al., (2012), suggested that for the successful implementation of public private partnerships some of the key Factors to be consider: are equitable allocation of risks, strong private sector consortium, judicious government control, transparent and efficient procurement process, project economic viability, and business diversification, adequate legal framework and stable political environment and stable and transparent political/social situation, available financial market. Gaby (2011) observed that Provide appropriate framework conditions that will in turn enable the private sector most notably the insurance companies to focus their efforts on providing insurance to the low-income market. Take responsibility of social protection this will often take the form of social assistance within the framework of programmes such as cash transfers.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter discusses the details methods use for the research. It addresses issues on research strategy, design and process. Some of the specific area considered was data collection instruments, population of the study, sampling technique and sample size and data preparation and statistical tools. These methods were adopted to bring to bear the exploratory study of implementation of PPP in affordable housing.

#### **3.2 Research Strategy, Design and Process**

According to Creswell (2003), there exist three methods of approach in research; quantitative, qualitative, and mixed methods approaches. The adaption of any of them is dependent on the purpose of the study. The choice of research methodology and design is to enable the planning and implementation of the study to achieve the intended goal. Research design is the framework for data collection and analysis; the structure that guides the execution of the technique for collection and analysis of data (Bryman, 1992). Similarly, the research design provides the linkage between empirical data and its conclusions which is logical to the research questions of the study (Bryman, 2004). According to Burns and Grove (1999), methodology comprises the design, setting, sample, methodological limitation and data collection and the techniques used for data analysis.

This study was conducted within the framework of the quantitative strategy. This was to ascertain the opinion of respondents on the key players in the affordable housing delivery. It is also believed that respondents have had experience which they can

readily recollect through the conduct of a survey. In the light of this survey questionnaire was used to elicit information from respondents. The use of survey questionnaire would enable the generalization of the research findings. This would provide the foundation for managers of key players in the affordable housing delivery in country to adopt the findings of this study to improve housing delivery.

### **3.3 DATA COLLECTION**

#### **3.3.1 Data Collection**

Data collection for the conduct of this study was by desk survey and field survey. The desk survey which is the review of pertinent literature aided in the identification of relevant variables for the design of survey questionnaire. The survey questionnaire was used during the field study to collect raw data from respondents for analysis and interpretation.

#### **3.3.2 Sampling Frame and Sample Size Determination**

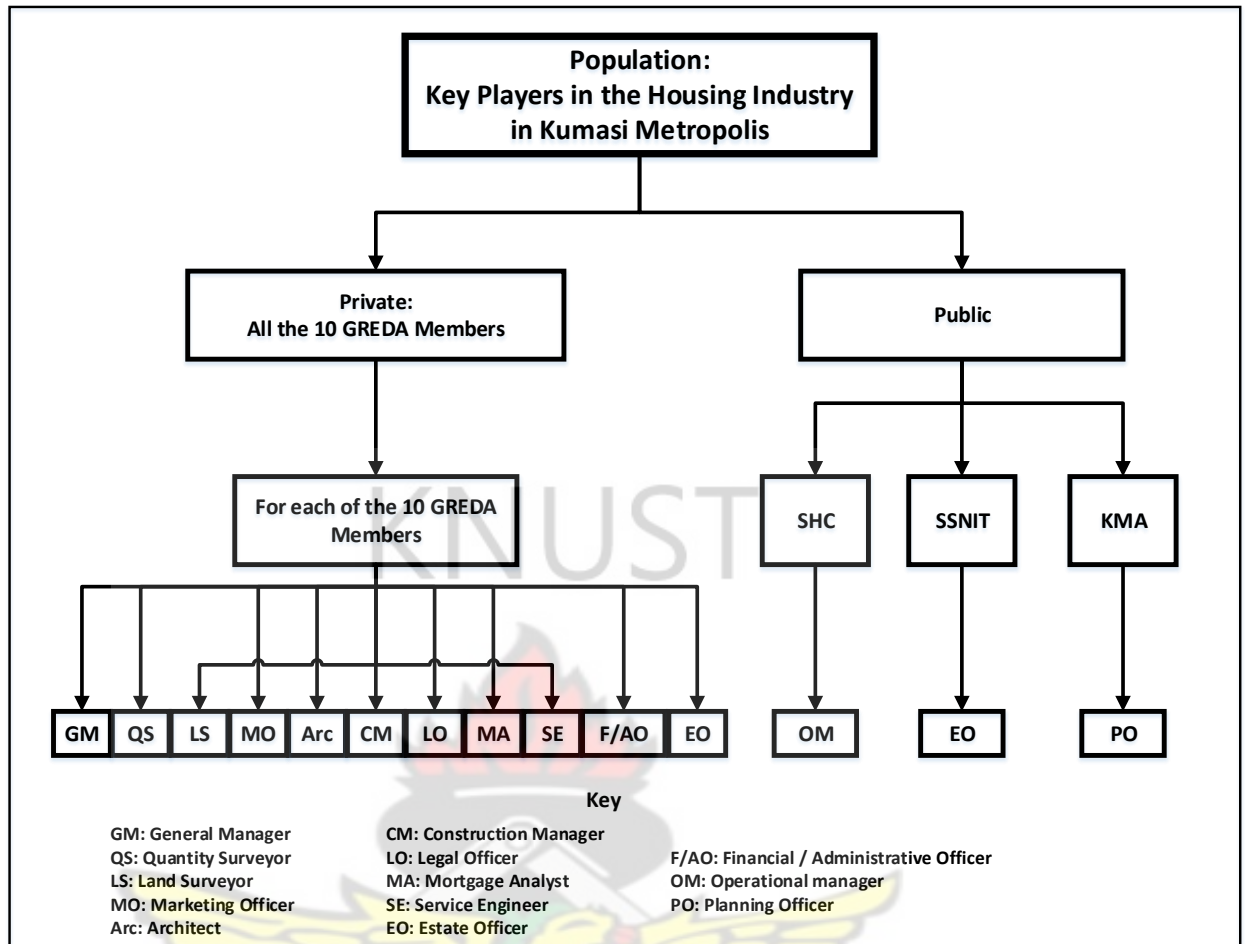
The survey frame described the population to be surveyed. Within the context of this study, the survey frame consists of GREDA, State Housing Company Limited (SHC), Kumasi Metropolitan Assemble (KMA), and Social Security and National Insurance Trust (SSNIT), GREDA within Kumasi Metropolis had 10 members and all of them were conceded in the research. Preliminary research reveal that, each firm had the following departmental head: General Manager, Legal Officer, Construction Manager, Financial/Administration Officer, Marketing Officer, and Mortgage analysis, Land Survey, Quantity Surveyor, an Architect, Estate Officer and Service Engineer. These were the respondents to the questionnaire in the case of each GREDA member. In all one hundred and thirteen (113) were targeted, one hundred

and ten (110) from GREDA and one each from the three public institution notably SHC, SSNIT and KMA. This gave each firm 11 respondents which gave total population of 110 and the public sector 3 which gave total population 113.

The breakdown of the sampling frame as far the professions of respondents are concerned is demonstrated in Table 3.1 below.

**Table 3.1: Sampling Frame**

	<b>Profession</b>	<b>Number of Professionals</b>
<b>s/no</b>	<b>GREDA Members</b>	
<b>1</b>	General Managers	<b>10</b>
<b>2</b>	Legal Officers	<b>10</b>
<b>3</b>	Construction Managers	<b>10</b>
<b>4</b>	Financial/Administration Officers	<b>10</b>
<b>5</b>	Marketing Officers	<b>10</b>
<b>6</b>	Mortgage analysts	<b>10</b>
<b>7</b>	Land Surveyors	<b>10</b>
<b>8</b>	Quantity Surveyors	<b>10</b>
<b>9</b>	Architects	<b>10</b>
<b>10</b>	Estate Officers	<b>10</b>
<b>11</b>	Service Engineers	
	<b>GREDA TOTAL</b>	<b>110</b>
	<b>Public Sector (SHC, KMA and SSNIT)</b>	
<b>12</b>	Planners	<b>1</b>
<b>13</b>	Operations Managers	<b>1</b>
<b>14</b>	Estate Officers	<b>1</b>
<b>Total</b>		<b>3</b>



**Figure 1: Diagram demonstrating sampling frame**  
**Source: Author's Construct.**

Purposive sampling was adopted for the selection of respondents in the conduct of this study. The purposive sampling was adopted because of the professionals identified were regarded as the most credible to provide valid information for the study. The adoption of the purposive sampling was also used because of technical information are required which can only be provided by the professionals involved in the study. The sampling enable researchers to focus on typical areas where respondents can be located (see for instance Struwig *et al.*, 2001). In the conduct of this study, the respondents were traced to their various locations of practice to collect cogent information from them since they are the only professionals who can provide such information. In using the purposive sampling, the intention of the researcher

was to cover the survey population during the administration of the survey questionnaire; however, time constraints and inability of respondents to turn in their answered questionnaire limited the sample size to 62.

### **3.2.3 Survey Questionnaire Design**

The design of the questionnaire took into consideration the background of experience. Questions were worded in such a way that they were devoid of technical words. This is to stimulate maximum understanding and response from respondents. Additionally, the survey questionnaire was pre-coded and structured, consisting of close-ended questions with options for respondents to select using the likert scale. The responses to the questions using the five point likert scale were 1= not effective, 2= less effective, 3=moderately effective, 4=effective, 5= very effective. Other notable responses on for the questions consist of “not severe” to very severe” . The questionnaire which fitted on to a 3 page A4 sheet comprises of questions bordering on background of respondents; strategies for adoption of PPP in affordable housing delivery; challenges confronting the implementation of PPP in affordable housing delivery; and the success factors for implementation of PPP in affordable housing delivery.

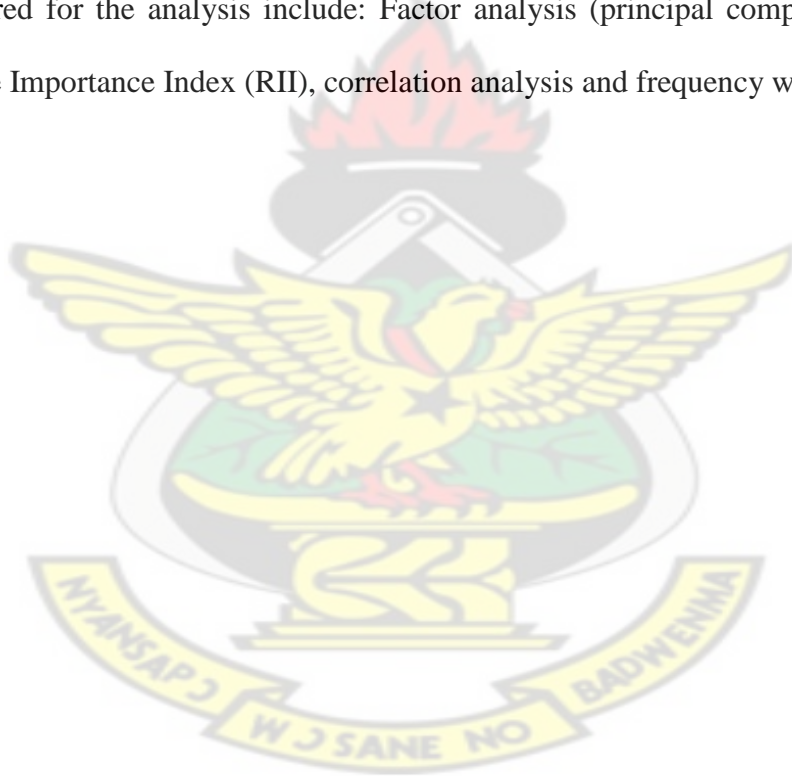
### **3.3 INSTRUMENT ADMINISTRATION**

The survey questionnaires were hand delivered personally by the researcher to all members of the population as far as this study is concerned in the Kumasi Metropolis. The administration of the questionnaires began on from the first week of August and ended on the first week of September, 2014. A few of the questionnaires were

retrieved on the spot while majority of the questionnaires were retrieved later. In all 113 questionnaires were administered and 62 questionnaires were retrieved representing a response rate of 55%.

### **3.4 DATA PREPARATION AND TOOLS FOR ANALYSIS**

The raw data was gathered and processed into a form suitable for analysis (data sorting). The Statistical Packages for Social Sciences (SPSS version 16) and Microsoft Excel was used for the analysis of the raw data. Statistical tools that were considered for the analysis include: Factor analysis (principal component analysis), Relative Importance Index (RII), correlation analysis and frequency with percentage.



## CHAPTER FOUR

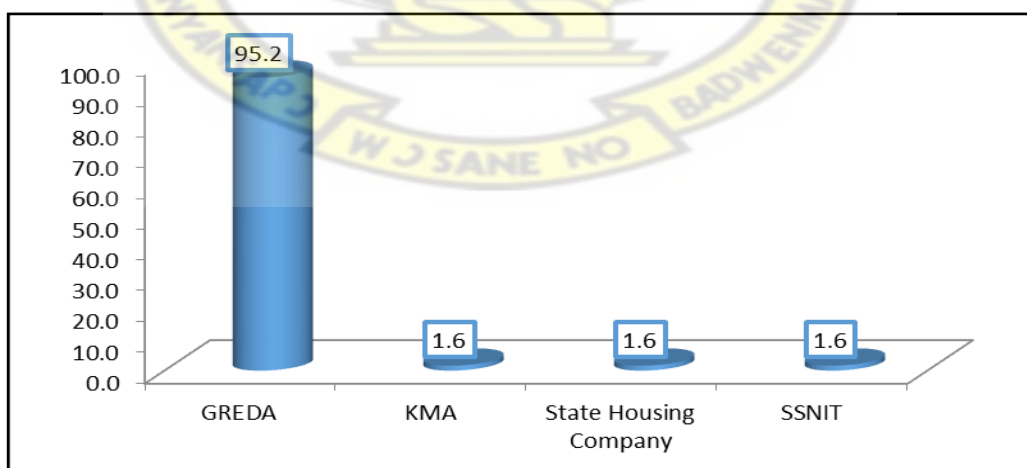
### DATA ANALYSIS AND DISCUSSION OF RESULTS

#### 4.1 Introduction

This chapter discusses the results of the study in the form of graphs and tables. This chapter is also divided into sub-headings to throw more light on questions asked on the field. A total of one hundred and thirteen (113) questionnaires were sent to respondents in Kumasi Metropolitan area Ashanti Regions. A total of sixty-two (62) questionnaires were received representing a response rate of fifty five percent (55%). The statistical tools used for the analysis were frequency with percentage, Factor analysis, and Relative Importance Index (RII) and correlation analysis between two variables.

#### 4.2 Respondents' Information

Information of respondents gathered from the study comprises of their institutions, number of years they have been in the institution and their highest level of qualification. Figure 4.1 to figure 4.3 present results of respondents' information.



Figures 4.1: Institution of Respondents Source: Field Study, 2014

Respondents were asked to indicate their institutions and the results shown that 95.2 percent were from GREDA, 1.6 percent from state housing company, 1.6 percent each from KMA and SSNIT. Majority of the respondents were from GREDA as in figure

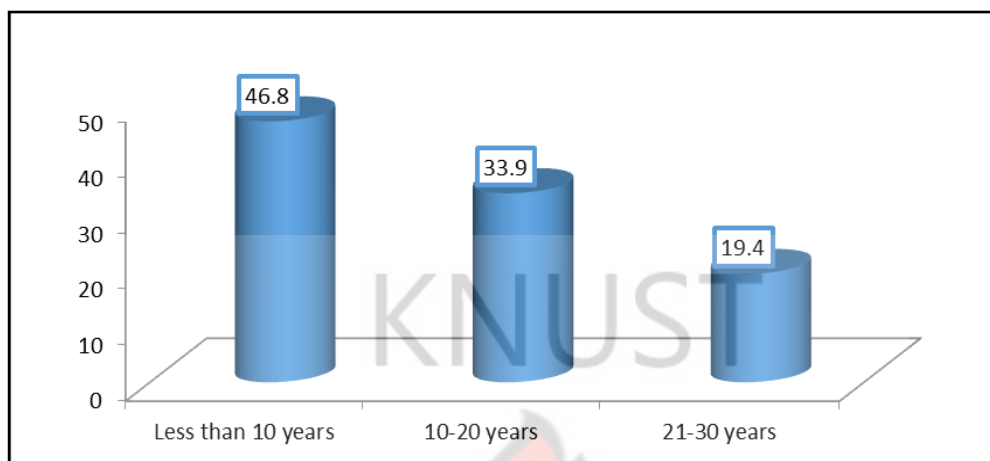
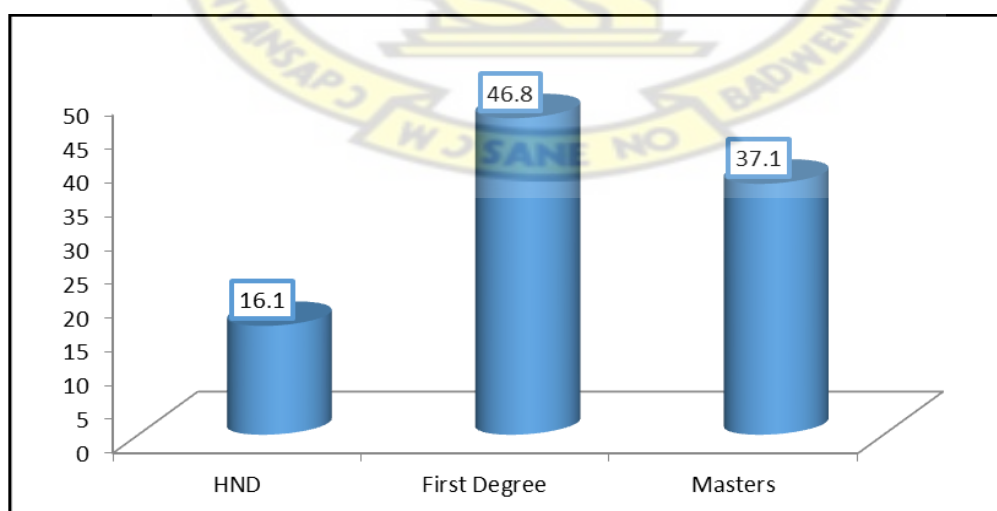


Figure 4.2: Number of years been in the institution Source: Field Study, 2014

Respondents who have been in the institution for less than 10 years were more representing 46.8 percent. Those who have worked between 10-20 years represent 33.9 percent and those worked between 21-30 years represent 19.4 percent. It was observed that 53.3 percent of the respondents have worked from 10 to 30 years in their institution. No respondents have worked over 30 years.



Figures 4.3: Highest level of qualification Source: Field Study, 2014

In assessing the highest level of qualification of respondents, it was observed that 37.1 percent have masters' degree, 46.8 percent have first degree and 16.1 have HND. No respondent have PhD qualification in all the institution. There were more first degree qualification, followed by masters and finally HND.

#### **4.2 The Extent of Response on each Objective**

The objectives of the study were to identify the strategies used in adaption of PPP in affordable housing delivery in Ghana, and again to identify the severity of some challenges in the implementation of PPP in affordable housing delivery. And finally to measure how effective their success Factors have been in the adoption of the Public Private Partnership in affordable housing delivery.

#### **4.3 Strategies for the Implementation of the Public Private Partnerships in Affordable Housing Delivery**

In identifying the strategies for the implementation of the public private partnerships in affordable housing delivery, two main statistical tools were used; Factor analysis and relative importance index.

Table 4.1: Descriptive Statistics (Strategies)

N	62
Mean	66
Std. Deviation	15
Minimum	35
Maximum	97

Source: Field Study, 2014

Table 4.1 showed the average percentage score for the strategies as to how respondents rated it in general. Averagely, the strategies used in implementation of

PPP in affordable housing delivery in Ghana (Kumasi Metropolitan area) was observed to be 66 percent which showed that the strategies used were effective.

Table 4.2: Strategies (Relative Importance Index)

	N	Sum	Mean	RII	Ranking
Involvement of experts inputs from both the private and the public sectors	62	224	3.61	0.72	1
The public sector provides the performance specifications for the Private sector to design and build	62	220	3.55	0.71	2
Developing operational guidelines and tools for PPP projects by both partners	62	219	3.53	0.71	3
Matching the expertise from both partners	62	217	3.5	0.70	4
Transfer of public sector tasks to private partners for a period (Design-Build-Finance-Maintain-Operate (DBFMO))	62	214	3.45	0.69	5
Identifying potential development companies for PPP arrangement	62	214	3.45	0.69	6
Identifying potential resources in private sector for PPP arrangement	62	206	3.32	0.66	7
The creation of broad public and political support for PPP	62	204	3.29	0.66	8
Developing PPP projects and managing capacity of both partners.	62	203	3.27	0.65	9
The private sector uses equity funds to finance housing schemes while the public sector supervises the execution of the housing scheme	62	197	3.18	0.64	10
Risk sharing between private and public sectors in housing delivery	62	196	3.16	0.63	11
The removal of any regulatory obstacles in PPP arrangement	62	196	3.16	0.63	12
Collaboration with communities in housing schemes development	62	187	3.02	0.60	13
The private sector constructs and finances the capital cost of an asset for the public sector to operate.	62	185	2.98	0.60	14
Provision of funds by the public sector for the private sector to execute the projects	62	177	2.85	0.57	15

Source: Field Study, 2014

Table 4.2 showed the relative importance index of the factors measuring strategies, expressed in percentage terms. The involvement of experts from both the private and public sector was rank first with a RII of 0.72. The ranking reveals that, it is a very good strategy for the implementation PPP for the affordable housing delivery, especially in Ghana. It points out that there is the need for both public and private

sector to bring their complementary skills and expertise for the achievement of a PPP in affordable housing delivery. This view is supported by Moskalyk (2008) which advocates consultative PPP arrangements in which both public and private sector expertise advice and input are needed and community groups in PPP. Therefore, experienced and well trained experts have a very important role to play in the formation of PPP for the delivery of affordable housing.

Provision of performance specification by the public sector for the private sector to design and build (DB) came second in terms of the ranking with RII of 0.71. This goes with the transfer of all technical performance risks from the public sector to the private sector suggesting that the private sector is better placed in managing risks than the public sector in the delivery of housing. If the risks are well managed during the implementation of the designing and building of houses, it reduces cost, and makes housing affordable.

On the other hand, the ranking of this factor as second also reveals that the public sector provides good performance specifications and monitoring strategies during implementation of building projects. This ensures the provision of quality and durable housing, which are key in affordable housing delivery. This has been affirmed by United Nations Economic Commission for Europe (2008), the private sector should design and build infrastructure to meet public sector performance specifications, often for a fixed price, and on turnkey basis, so the risk of cost overruns is thereby transferred to the private sector. Developing operational guidelines and tools for PPP projects by both partners was ranked third with a RII of 71%. This indicates that, there is the need to define policy operational guidelines and tools for PPP projects by both partners, which will remain as a scheme that can be employed to address affordable housing

difficulties. Different operational guideline and tools comes with different implication. It is therefore important to develop the operational guidelines for the partners to streamline their operational area.

The difficulty of working with different people with different level of experience and background has its own challenges and the respondents felt it is strategically important to always much the experts and expertise coming from both partners. And this strategy ranked forth with a RII of 0.70 . The data show that transfer of public sector tasks to private partners for a period was rank fifth with a RII of 0.69. This strategy is view as one of the key strategies where the private sector actually performed the duty of a public sector. This is evidence in The Canadian Council for PPP (2011) the private partner designs build and finances an asset, provides facility management services as well as operation under a long term agreement (DBFOM). The researcher recognized during the data collection that identifying potential development companies for PPP arrangement is one of the key strategies but surprisingly it was rank averagely with a RII of 0.69. It has been observed again that you need to identify the companies for the formation of the partnerships.

Identification of potential resources in private sector in PPP arrangement was rank seventh with a RII of 69. This indicates that to achieve a drastic performance of PPP in affordable housing, it is important to identify what the partners bring on board. As it has been observed by Austin (2008) that what resources will the private sector bring to fill the gaps in the partnerships? Major conflicts and disagreement erupts when there is no broad base public and political support. The creation of broad public and political support for PPP was also observed as one of the strategies for which PPP

implementation in affordable housing delivery with RII of 0.66. The researcher agree with the assessment by Cheung (2012), that PPP needs a Strong government support, Stable and transparent political/social situation and adequate legal framework and stable political environment. This was affirm by Economic and Social Commission for Asia and the Pacific (2011), that the project scopes, planning and implementation issues, institutional due diligence, establishment of a project management structure, setting up of mechanism for stakeholder consultation and information disclosure. Ranking tenth with RII 0.64 is the private sector uses of equity funds to finance housing schemes while the public sector supervises the execution of the housing schemes. The respondents agree that the strategies in which the private sector finance the affordable housing while the public sector do the supervisory role has proven to be successful.

The strategies of risk sharing between partners in housing delivery with RII 0.63 which the researcher considers one of the most important strategies but respondents had surprisingly ranked these strategies Eveleth. In the opinion of the researcher, risk sharing between partners should be important in the PPP implementation in affordable housing delivery. Equitable sharing of risk between partners is very essential in the PPP implementation. Shen et al (2006) opined in the various forms how risk should be share between PPP partners. Site acquisition risks, inexperienced private partner risks, and legal and policy risks should be given to public sector while design and construction risks, operation risks and industrial action risks to the private sector. Development risks, market risks, financial risks and force majeure should be share between the partners. The removal of the any regulatory obstacles in PPP arrangement with RII 0.63 which is the role of the partnering public institution, help facilitates the

smoothing of the agreement. Regulatory obstacle such as tax, legislative framework contains complexities, overlapping and complex legal requirement may hinder the PPP implementation.

Collaboration with communities in housing scheme development as a variable with RII 0.60. This strategy which was ranked thirteen in the opinion of the respondents not considered important as a strategy. However, one would have thought that collaboration with communities in the implementation of communal projects would have been popular.

#### **4.3 Challenges Associated With Public Private Partnerships Involving Affordable Housing Delivering**

Respondents were asked to scale the challenges encountered in the implementation of PPP in affordable housing delivery. Factor analysis was run to identify challenges that were highly inter-correlated and individual variables were measured using relative importance index to identify challenge Factors that contribute much in relation to other Factors (variables).

Table 4.3 Challenges

Valid	62
Mean	77
Std. Deviation	12
Minimum	26
Maximum	94

Source: Field Study, 2014

Table 4.3 shows descriptive statistics, showing how respondents generally scored the challenges encountered in the implementation of PPP in affordable housing delivery.

It was observed from the analysis that Challenge(s) scored a mean percentage of 77. Meaning the issue of the challenges according to most respondents is key to the success or otherwise of the implementation of PPP in affordable housing. And reinforcing this position is the score of a relatively low standard deviation score of 12 percent, signifying how closely related are the positions of respondents.

Table 4.4 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.74
Bartlett's Test of Sphericity	Approx. Chi-Square	194.349
	df	78
	Sig.	0.000

Table 4.4 showed KMO and Bartlett's test which was run to check the degree of inter-correlation among the variables and the appropriateness of factor analysis. Kaiser-Meyer-Olkin (KMO) value of 0.74 indicated that the data is adequate and appropriate for factor analysis as suggested by Mueller (1978). Bartlett test of sphericity checks for the presence of correlation among the variables and provides the probability that correlation matrix has significant correlation among at least, some of the variables (Hair et al 2007; Field, 2005). Bartlett's test of sphericity for the study was highly significant ( $p < 0.000$ ) hence factor analysis was appropriate. After the KMO data adequacy and Bartlett's test of sphericity, data was then subjected to principal component analysis (with varimax rotation).

Table 4.5 Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cum. %	Total	% of Variance	Cum. %	Total	% of Variance	Cum. %
1	4.112	31.63	31.63	4.112	31.63	31.63	2.785	21.422	21.422
2	2.142	16.476	48.107	2.142	16.476	48.107	2.757	21.206	42.627
3	1.427	10.973	59.08	1.427	10.973	59.08	1.64	12.619	55.246
4	1.064	8.182	67.262	1.064	8.182	67.262	1.562	12.016	67.262
5	0.951	7.314	74.576						
6	0.782	6.017	80.593						
7	0.598	4.602	85.194						
8	0.436	3.355	88.55						
9	0.403	3.1	91.65						
10	0.326	2.511	94.161						
11	0.31	2.386	96.546						
12	0.247	1.902	98.448						
13	0.202	1.552	100						
Extraction Method: Principal Component Analysis.									

Source: Field Study, 2014

Table 4.4 Contains percentage of the variance that is accounted for by each component to the total variance in all of the variables. The extracted components explain about 67.26 percent of the variability in the original thirteen variables. Four Factors were extracted (grouped) in which each Factor variables are highly inter-correlated.

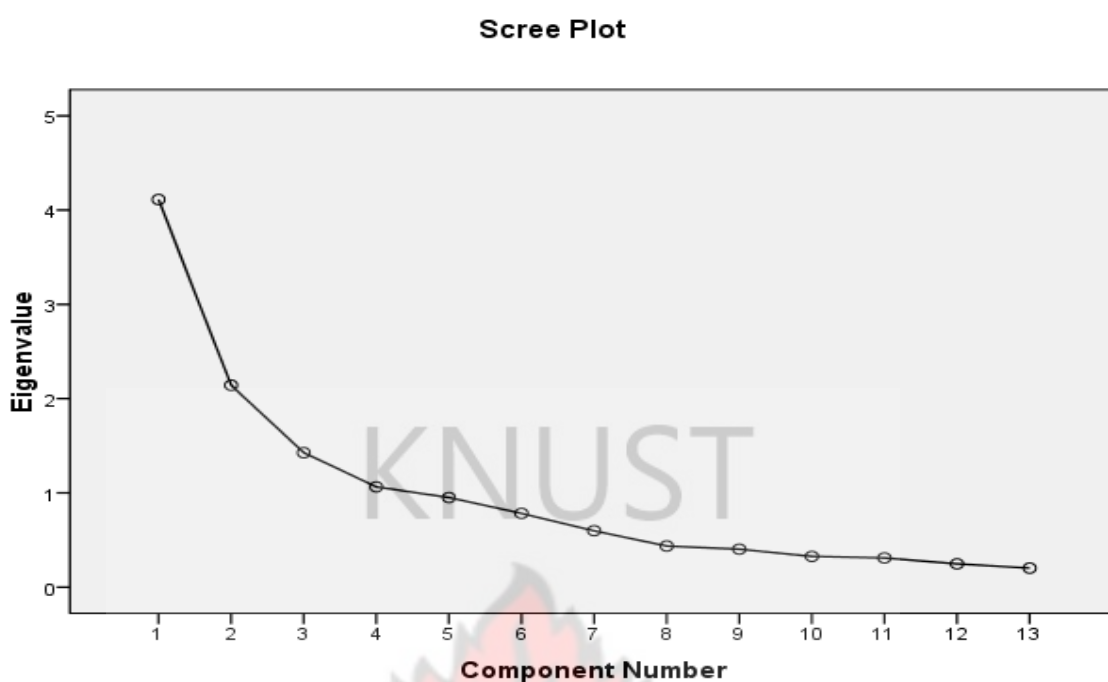


Figure 4.1

Table 4.6 Rotated Component Matrix<sup>a</sup>

Factors	Component			
	1	2	3	4
Inadequate information on public private partnerships program	<b>0.735</b>			
Lack of institutional capacity to undertake large and complex projects			<b>0.792</b>	
Weak Financial strength		<b>0.771</b>		
Lack of comprehensive policy, legal and institutional frameworks.				<b>0.841</b>
poor design implementation resulting from inability to assess investment proposals		<b>0.692</b>		
Lack of long-term financing instruments and appropriate risk sharing mechanisms.		<b>0.792</b>		
Inadequate domestic capital markets			<b>0.502</b>	
Lack of transparency in PPP arrangements		<b>0.701</b>		
Inefficient and unsustainable credit delivery to the housing sector.				<b>0.601</b>
ineffective coordination among housing Agencies	<b>0.681</b>			
Politicization of housing issues in the country	<b>0.698</b>			
The partners often have divergent strategic and operational realities			<b>-0.717</b>	
Lack of public awareness about PPP benefits	<b>0.819</b>			
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 7 iterations.				

Source: Field Study, 2014

## Discussion of the Results

Drawing on from the Table 4.5 above component 1 has been christened: poor communication gap, component 2: weak financial base in PPP, component 3 improper coordination and component four ineffective policy structures. The above list component has their detail discussion below.

Extracted components were presented in table 4.5, the first component consist of four components of challenges.

### Component 1: Poor Communication Gap between housing agencies

Challenges in this component comprise; inadequate information on public private partnerships program (0.735); ineffective coordination among housing agencies (0.681); politicization of housing issues in the country (0.698) and lack of public awareness about PPP benefits (0.819). The figures in the bracket indicate that loading of each variables impact on the component. On the position of respondents in their various institutions; ineffective coordination among housing agencies, politicization of housing issues, amount others in the country are a critical challenges. Daniele (2008) confirms this by adding that technically, sound public-private partnerships, in affordable housing delivery can fail without a full understanding of socio-political dynamics and the value of communication in their design implementation. This is also an evident from Ansah (2014) assessment of the PPP affordable houses which was initiated by NPP Government in 2001 for the construction of 20,000 affordable housing units across the country. This scheme was discontinued by the new NDC government in 2009.

## **Component 2: Lack of Financial strategies PPP**

In component two, four variables emerged consisting of weak financial strength (0.771); poor design implementation resulting from inability to assess investment proposals (0.692); lack of long-term financing instruments and appropriate risk sharing mechanisms (0.792) and lack of transparency in PPP arrangements (0.701).

The above component is titled lack of financial strategies in PPP implementation as challenges. Fundamentally, lack of good financial strategies can cause the failure of the PPP implementation. Farlam (2005), attribute to the fact that as part of donor agencies conditionality for developing countries such as Ghana for infrastructure delivery there should be a strategic domestic financial market. Khaled (2014), affirm that PPP in developing countries tackling the affordable housing problems lack strategic financial activation policy of the housing finance system, lack of financial goal. UN-HABITAT (2011), also alluded to the that, lack of regulatory financial environment has been characterized with complex financial challenges notably changing the financial landscape for PPPs in affordable housing delivery. Ademiluyi (2010), further added that since affordable housing delivery projects are long-term investments and capital intensive, lack of strategic financial institution encouraged to finance these projects lead to the failure of the PPP implementation.

## **Component 3: Improper Institutional formation**

Three variables emerged from component three; lack of institutional capacity to undertake large and complex projects (0.792); inadequate domestic capital markets (0.502) and the partners often have divergent strategic and operational realities

(-0.717). Ademiluyi (2010), pointed out that, Lack of effective institutional formation among Housing Agencies and government is critical challenge confronting the PPP in affordable housing redelivery.

#### **Component 4: Ineffective Policy Structure**

And three variables in component four, comprising lack of comprehensive policy, legal and institutional frameworks (0.841); inefficient and unsustainable credit delivery to the housing sector (0.601). In effective comprehensive policy, legal and institutional frameworks, inefficient and unsustainable credit delivery to the housing sector has been look at as an ineffective planning and policy structure.

United Nations (2008) observed that lack of ineffective PPP planning policy which set out a roadmap that fixes clear objectives, discusses the importance of reaching consensus, identifying the right PPP Projects, setting realistic targets and establishing procedures for consulting key stakeholders hinder the PPP implementation.

#### **4.4 Success Factors in the Implementation of Public Private Partnerships in Affordable Housing Delivery**

In identifying Success Factor, it was observed that the mean score for success factor was 72 percent with minimum and maximum score of 32 percent and 95 percent respectively. This means that success factor generally was effective in the institution.

Table 4.7: Descriptive Statistics (Success Factors)

N	62
Mean	72
Std. Deviation	16
Minimum	32
Maximum	95

Source: Field Study, 2014

Table 4.8 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.802
Bartlett's Test of Sphericity	Approx. Chi-Square	505.198
	df	136
	Sig.	0.000

Source: Field Study, 2014

Table 4.8 showed KMO test which clearly indicated that the data was adequate and appropriate for factor analysis. Bartlett's test also showed there was significant correlation among the variables. After the KMO data adequacy and Bartlett's test of sphericity, data was then subjected to principal component analysis (with varimax rotation).

Table 4.9: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cum. %	Total	% of Variance	Cum. %	Total	% of Variance	Cum. %
1	9.323	54.838	54.838	9.323	54.838	54.838	4.799	28.229	28.229
2	1.695	9.971	64.809	1.695	9.971	64.809	3.682	21.66	49.89
3	1.112	6.543	71.352	1.112	6.543	71.352	3.649	21.463	71.352
4	0.757	4.453	75.805						
5	0.679	3.995	79.8						
6	0.647	3.806	83.606						
7	0.483	2.843	86.449						
8	0.423	2.491	88.94						
9	0.403	2.371	91.312						
10	0.343	2.017	93.329						
11	0.278	1.635	94.964						
12	0.231	1.359	96.322						
13	0.212	1.249	97.572						
14	0.179	1.055	98.626						
15	0.122	0.72	99.346						
16	0.071	0.421	99.767						
17	0.04	0.233	100						
Extraction Method: Principal Component Analysis.									

Source: Field Study, 2014

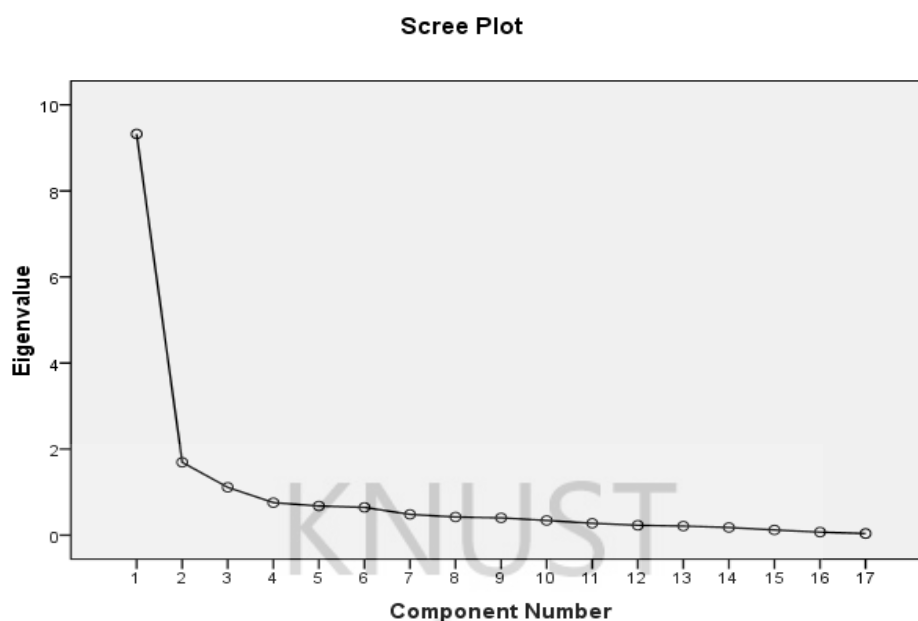


Figure 4.2

Table 4.10: Rotated Component Matrix<sup>a</sup> (Success Factors)

Factors	Component		
	1	2	3
A Permanent government involvement			<b>0.587</b>
A sound regulatory framework		<b>0.656</b>	
Commitment of partners		<b>0.605</b>	
A common vision and trusted relationship between partners			<b>0.862</b>
Proper project financing strategy			<b>0.626</b>
Good information dissemination and communication system	<b>0.743</b>		
Continuous project monitoring and control			<b>0.765</b>
Compelling managerial capabilities	<b>0.599</b>		
No political pressure and interference		<b>0.755</b>	
Community participation and support		<b>0.841</b>	
Proper planning and infrastructure network	<b>0.809</b>		
Development policy and institutional framework	<b>0.766</b>		
Effective Constant communication between partners	<b>0.799</b>		
Equitable allocation of risks		<b>0.692</b>	
Transparent and efficient procurement process	<b>0.631</b>		
Adequate legal framework and stable political environment	<b>0.788</b>		
Integration of effective measures		<b>0.527</b>	
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 5 iterations.			

Source: Field Study, 2014

The analysis revealed three main success factors out of the lot of success factors, as in Table 4.8. These three success factors are the driving forces that are likely to lead to a successful implementation of a PPP program. The first success factor as observed from Table 4.8

### **Component 1: Good Organizational relationship**

Component 1 comprises seven (7) variables, which accounted for 54.838% of the total variance. These component consist of good information dissemination and communication system(0.743);following on in an order of importance by compelling managerial capabilities(0.599); proper planning and infrastructure network(0.809); development policy and institutional framework (0.809); effective constant communication between partners(0.799); transparent and efficient procurement process(0.631); and lastly adequate legal framework and stable political environment(0.788). Examination of the seven variables that correlated very well indicates that the underlying factor for the component could be named Good Organizational Structure (NASCIO 2006), affirm that, A successful partnership between the public and private sectors depends on all of the people involved with the project, it is observe that, problematic public-private partnerships usually result from non-technical challenges that arise in the working relationship. Eziyi (2010) conclude that, although PPPs have been adopted in addressing housing provision challenges in Nigeria, the extent to which government is responding to its changing role and the emphasis on good relationships in housing provisions have not been adequately addressed.

## **Component 2: Effective Collaboration**

Component two consist six (6) variables, which accounted for 9.971% of the total variance a sound regulatory framework (**0.656**); comes top the rest of the variables under. Factor 2 consideration following on in the order of importance by; commitment of partners (**0.605**); no political pressure and interference (**0.755**); community participation and support (**0.841**); equitable allocation of risks (**0.692**) and lastly integration of effective measures (**0.527**). all these variable are name effective collaboration. Jamali (2004) added that actual partnering therefore involves effective collaboration across organizational bounders and leveraging the strengths of both the private and public sector. Samii et al. (2002), highlight the key formation requirements of PPPs, is effective collaboration which includes intensive regular communication through different channels or means. While Kanter (1994) equally supported effective collaboration that should be reasonably open, Partners share information required to make the relationship work, including their objectives/goals, technical data/knowledge of conflicts, trouble spots or changing situations.

## **Component 3: Strong Commitment**

And the third component, that is, permanent government involvement (**0.587**); topping the list with, a common vision and trusted relationship between partners (**0.862**); proper project financing strategy (**0.626**); and continuous project monitors and control (**0.765**) follows in an order of importance respectively. Strong commitment has been observe to be the key in PPP formation. Jamali(2004), admitted that, partners in PPP should commit their complementary strengths and weaknesses in the delivery of the affordable housing.

Table 4.11: Correlations (Measuring Tools)

		Strategies	Challenges	Success Factors
Strategies	Pearson Correlation	1	.379**	.813**
	Sig. (2-tailed)		0.002	0.000
	N	62	62	62
Challenges	Pearson Correlation	.379**	1	.333**
	Sig. (2-tailed)	0.002		0.008
	N	62	62	62
Success Factors	Pearson Correlation	.813**	.333**	1
	Sig. (2-tailed)	0	0.008	
	N	62	62	62

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Field Study, 2014

Table 4.11 showed correlation analysis measuring the relationship between two variables. Correlation coefficient close to (+1) and (-1) indicate strong positive correlation and strong negative correlation respectively. It was observed from the table that correlation coefficient between strategies and challenge was 0.379 showing positive correlation. Correlation coefficient between strategies and success factor was 0.813 showing strong positive correlation. Thus, there was strong positive correlation between strategies and success factors into public private partnership in affordable housing delivery. There was significant relationship between the two variables, thus as management in the institution develop strategies factors into public private partnership in affordable housing delivery it positively impact into success of the affordable housing delivery. In the same way, as management develop effective strategies that resulting to success, challenges also show positive correlation to both strategies and success actors.

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

The aim of this study was to explore the dynamic for the adaptation of public private partnerships in affordable housing delivery in order to scale down the mounting housing deficit in Ghana. To accomplish this aim, a number of objectives were set as guidance to the research question. In this chapter the aim and the research question were look at to examine how far the aim of this study has been accomplish. This chapter gives recommendations of the researcher according to his findings of the study. It further discusses problems encountered during the study.

#### **5.2 Summary of Findings**

The summary of the findings are directly connected to the objectives of the study. The study found that, collaborating with community in PPP housing scheme were good strategies for effective PPP implementation. Involvement of expert advice and input and risk sharing between partners were equally uncovered by the study as strategies for PPP implementation in affordable housing delivery.

Additionally the study identified Politicization of housing issues which as a challenge to PPP implementation in affordable housing delivery. Similarly, the study revealed that politicization of housing delivery issues such as PPP has brought about the discontinuation of affordable housing project started sitting governments. Furthermore, the study found inadequate information on PPP programme ; and lack of sound regulatory framework as fundamental challenges confronting PPP

implementation in affordable housing delivery. The research also revealed that effective constant communication between partners, commitment of partners and permanent government involvement were success factor for PPP implementation.

### **5.3 Research Questions**

Three main questions were proposed for this study.

- What are the strategies adopted by public private partnerships in affordable housing delivery?
- What are the challenges confronting adaption public private partnerships in affordable housing delivery?
- What are success factors for the adaptation of public private partnerships in affordable housing delivery?

#### **5.3.1 Review of First Objective**

The first objective focuses on the best strategies to be implemented in Public private partnerships in affordable housing delivery in Ghana. This objective has been achieved by the review of relevant literature. The literature has shown that there are various best strategies which can be implemented for the delivery of affordable housing. It is therefore concluded that, the following are the best strategies for the implementation of PPP:

1. Involvement of experts inputs from both the private and the public sectors
2. The public sector provides the performance specifications for the Private sector to design and build
3. Developing operational guidelines and tools for PPP projects by both partners
4. Matching the expertise from both partners

5. Transfer of public sector tasks to private partners for a period (Design-Build-Finance-Maintain-Operate (DBFMO))

### **5.3.2 Review of Second Objective**

The second objective concentrates various challenges confronting public private partnerships in affordable housing delivery. Questionnaires were sent to various key players in the housing industry to ascertain the level of challenges they faced in the affordable housing delivery. Based on the results the most significant challenges for the implementation of PPP are:

1. Politicization of housing issues in the country
2. Weak Financial strength
3. Inadequate domestic capital markets
4. Lack of long-term financing instruments and appropriate risk sharing mechanisms.
5. Lack of public awareness about PPP benefits
6. Inefficient and unsustainable credit delivery to the housing sector.

### **5.3.3 Review of Third Objective**

The third objective focused on identifying the successful factor under which PPP implementation in affordable housing delivery can be achieved. Relevant institution and professional were contacted in the exploitation of these factors to the benefit for PPP in affordable housing delivery. The following are the best success factors under which PPP can be achieved:

1. Effective Constant communication between partners
2. Adequate legal framework and stable political environment
3. Continuous project monitoring and control
4. Commitment of partners
5. Proper planning and infrastructure network

6. Proper project financing strategy
7. Transparent and efficient procurement process

#### **5.4.0 Recommendations**

##### **5.4.1 Recommendation for Industry**

In view of the above conclusion, the researcher makes the following recommendations for industry:

- The public sector should enforce a sound legal regulatory framework and stable political environment;
- There is the need to involve experts' inputs and advice from both the private and the public sectors for the decision making in implementation of PPP in affordable housing delivery;
- There should be general consensus about effective Constant communication between partners; and
- There should be an operationalized intervention strategy for PPP development in affordable housing delivery.

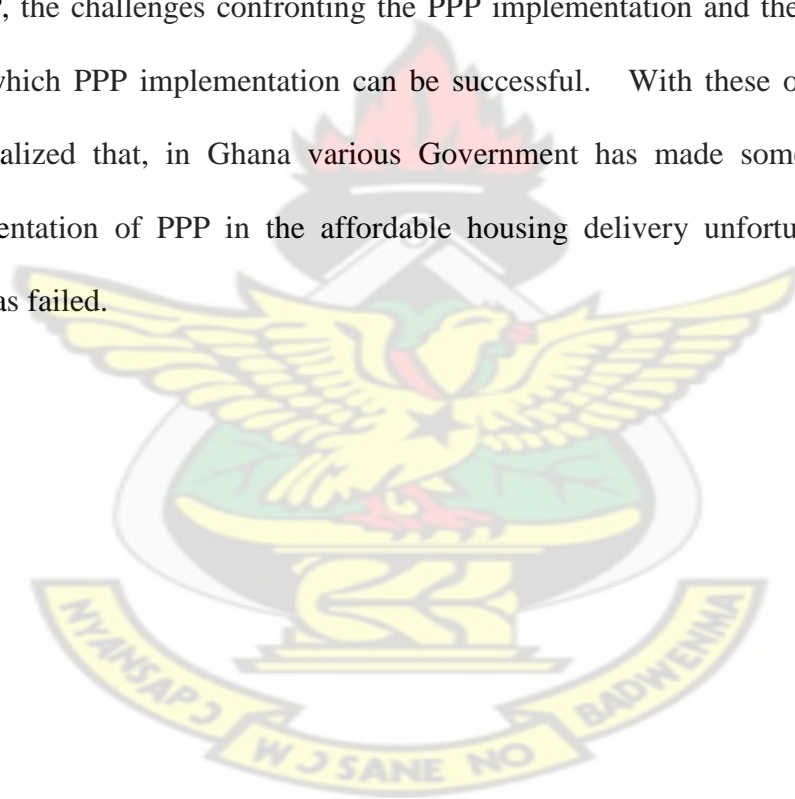
##### **5.4.2 Recommendations for Policy Directions**

The researcher therefore recommends that, there should be dynamic processes of PPP implementation. The key players in the housing industries and Government should developed a national affordable housing polices. Affordable housing delivery should be view as national issue in order for not any political party to truncate existing policy. It is also essential that some of the developing country like Ghana can adopt PPP strategies in affordable housing delivery from the developed world where it has been practice and tested.

## 5.5 Summary of Chapter

The conclusion can therefore be drawn that affordable housing situation is a common phenomenon around the world these days. The ever-growing urban population in recent times couple with sluggish economic growth in developing countries such as Ghana has widen the housing deficit. The study seeks to explore the dynamics for the implementation of the PPP as an alternative mean of reducing the housing deficit.

The researcher in a way of assessing the PPP as an alternative mean has the following objective that meant to identify the strategies to be adapted for the implementation of the PPP, the challenges confronting the PPP implementation and the success factors under which PPP implementation can be successful. With these objectives, it has been realized that, in Ghana various Government has made some effort for the implementation of PPP in the affordable housing delivery unfortunately all these effort has failed.



## REFERENCES

- Abdul-Aziz, A.R. and Kassim, P.S.J. (2010). *Objectives, success and failure factors of housing public private partnerships in Malaysia*, journal homepage: [www.elsevier.com/locate/habitatint](http://www.elsevier.com/locate/habitatint), University Sains Malaysia, Penang, Malaysia
- Abhilasha. M. (2014). *Public Private Partnerships in India Enabling Environment PPP Cell*, Department of Economic Affairs, Government of India
- Ademiluyi, I. A. (2010). *Public Housing Delivery Strategies in Nigeria: A Historical Perspective of Policies and Programmes* Department Of Geography and Regional Planning, Olabisi Onabanjo University, Ago-Iwoye, Ogun State, Nigeria
- Ansah, S.K. (2014). *Housing deficit and delivery in Ghana: intervention by various Governments*. Department of Building Technology, Cape Coast Polytechnic, P.O Box AD 50, Cape Coast Ghana, International Journal of Development and Sustainability Volume 3 Number 5
- Arthur, C. N. Pendall, R. Dawkins, C.J. Knaap, G.J. (2002). *The Link between Growth Management and Housing Affordability: The Academic Evidence*, a Discussion Paper Prepared for The Brookings Institution Center on Urban and Metropolitan Policy
- Austin, P.M. (2008). *Public Private Partnerships for funding affordable Housing Developments in New Zealand*. University of Auckland, Waitakere city Council.
- Bank of Ghana, (2007). *The housing market in Ghana*, Accra, Ghana
- Bertaud, A. (2013). *Urban Planning and Housing Affordability*, 10th Annual Demographia, International Housing Affordability Survey.

- Boamah, N.A. (2010). *Housing Affordability in Ghana: A focus on Kumasi and Tamale*. Ethiopian Journal of Environmental Studies and Management Vol.3 No.3
- Bryman, A. (2004). *Social research methods*, 2nd edn., Oxford: Oxford University Press.
- Bryman, A. (1992). *Quantitative and qualitative research: Further reflections on their integration*. In J. Brannan (Ed.), *Mixing methods: Qualitative and quantitative research* (pp. 89-111). Hants, England: Avebury.
- Burns, N. and Grove, S.K. (1999). *Understanding Nursing Research*. (2nd edn). Philadelphia: W.B. Saunders Company.
- Carter , T. (2012). *Neighborhood Improvement: The Role of Housing and Housing Institutions*. University of Winnipeg, Winnipeg, MB, Canada
- Canadian Council for Public Private Partnerships, (2011). *Public Private Partnerships, A guide for Municipalities*
- Cheung. E. Chan, A.P.C. Lam, P. T.I. Chan, D. W.M. and Ke Y. (2012). *A Comparative Study of Critical Success Factors for Public Private Partnerships (PPP) between Mainland China and the Hong Kong Special Administrative Region*, Facilities - Special Issue on Facility Management Development (Final Accepted Manuscript), Volume 30, Issue 13/14.
- Creswell, J.W. (2003). *Research Design Qualitative, Quantitative. and Mixed Methods Approaches*. Second Edition, University of Nebraska, Lincoln
- Davies, P. and Kathryn, E. (2005). *Delivering the PPP promise a review of PPP issues and activity Partner*, PricewaterhouseCoopers

- Department of Urban Studies and Planning, (2012). Exploring the enabling approach to housing through the Abuja mass housing scheme Massachusetts Institute of Technology.
- Daniele, C. (2008). Strategic Communication for Privatization, Public-Private Partnerships, and Private Participation in Infrastructure Projects, World Bank Working papers no 139
- Enshassi, A. Sherif M. Ziad A. M. and Peter E.M. (2007). Factors Affecting Labour Productivity In Building Projects in the Gaza Strip”, Journal of Civil Engineering.
- Ernest and Young, (2013). *Mayoral Position Paper on Public Private Partnerships Building a better working world*
- Ernest and Young, (2012). Accelerating Public Private Partnerships in India
- Eziyi , O. I. and Egidario, B.A. (2012). *Public-Private Partnerships (PPPs) in Urban Housing in Nigeria: Evidence from Ogun State*. Department of Architecture, College of Science and Technology Covenant University, Canaan Land, Ota Ogun State, Nigeria
- Eziyi, O. I. (2010). *An Assessment of The Role of Government Agencies in Public-Private Partnerships in Housing Delivery in Nigeria*, Journal of Construction in Developing Countries, Vol. 15(2), 23–48,
- Erik, H.K. and Geert, R.T. (2002). *Institutional and Strategic Barriers to Public-Private Partnership: An Analysis of Dutch Cases*, Paper for the British Academy of Management Conference, Middlesex University London
- Farlam, P. (2005). *Working Together Assessing Public–Private Partnerships in Africa*, The South African Institute of International Affairs, Nepad Policy Focus Series

Field, A. (2005). “Discovering Statistics using SPSS for Windows” London: Sage

Gaby R. (2011). Spring Newsletter- the Micro insurance trilogy.

Ghana Millennium Development Goals Report, (2010). National Development Planning Commission (NDPC)/ Government of Ghana and the United Nations Development Programme (UNDP) Ghana (2010). Ghana Millennium Development Goals Report.

<http://www.ndpc.gov.gh/GPRS/2008%20Ghana%20MDG%20Report.pdf>.

(Accessed on 7th July 2014).

Ghana News Agency (GNA). (2014). *President Mahama Calls for Partnership in Housing*. [Online] Available from:

<http://www.ghananewsagency.org/social/president-mahama-calls-for-partnership-in-housing--76673>. [Accessed: 30-Jun-2014]

Giddings, S.W. (2007) *Housing challenges and opportunities in Sub-Saharan Africa*, Washington .D.C 2002. International housing coalition 10 G Street NE. Suite 480.

Government of Ghana Ministry of Finance and Economic Planning, (2011) National Policy on Public Private Partnerships, Private Participation In Infrastructure And Services For Better Public Services Delivery

Hans, W. A. Satyanarayana, N. K. Ogunlana, S. Wang, S. P. Abednego, M. Frank-Jungbecker A. Yu-Chien ,A. Yongjian, K. YuWen Liu, L. Boeing S. GuoFu Z.(2009). *Public-Private Partnership in Infrastructure Development Case Studies from Asia and Europe*. Docupoint Magdeburg GmbH.

Hair, J.F. Anderson, R.E. Tatham, R.L. & Black, W.C. (2006, 2007). “Multivariate Data Analysis with Reading”, Prentice-Hall, Englewood Cliffs, NJ

Hong Kong Institute of Surveyors, (2009). *Practical Guide to Public Private Partnership (PPP) Projects*, Suite 801, 8/F., Jardine House 1 Connaught Place, Central, Hong Kong

Jamali, D. (2004). *Success and failure mechanisms of public private partnerships in developing countries: insights from Lebanon*, Emerald The International Journal of Public Sector Management

Kim, J. and Mueller, C. (1978). "Introduction to Factor Analysis: What it is and how

Klijn, K. E. and Teisman, G. R. (2002). *Institutional and Strategic Barriers to Public-Private Partnership: An Analysis of Dutch Cases, to do it*", Beverly Hills, Sage

Kanter, R.M. (1994). "Collaborative advantage: the art of alliances", Harvard Business Review

Khaled,M.. Nor'Aini, Y. Ruhizal Bin, R. (2014), PPPs as a Housing Delivery for Affordable Housing Development in Yemen, Business Management Dynamics Vol.3, No.8, Available online [www.bmdynamics.com](http://www.bmdynamics.com)

Kissick,D. Leibson, D. Kogul, M. Bachmann, J. Anderson, J. Eckert, J. (2006). *Housing for All:*

*Essential to Economic, Social, and Civic Development*, the world urban forum iii vancouver

KPMG, (2010). *Affordable Housing – A key growth driver in the real estate sector?* KPMG in India

Milligan, V. and Gilmour, T. (2012). *Affordable Housing Strategies* University of New South Wales, Sydney, NSW, Australia

Moskalyk, Alexandra. (2008). *The Role of Public-Partnerships in Funding Social Housing in Canada*. Ottawa: Canadian Policy Research Networks.

NATAG, (2012). Media Release. National Tenants Association of Ghana All Media Houses

NASCIO, (2006). Keys to Collaboration: Building Effective Public-Private Partnerships

Rosten, W.(2009). Envisioning development/guide No 1, what is affordable housing? The Center for Urban Pedagogy 232 Third Street #B402B Brooklyn, NY 11215 [info@anothercupdevelopment.org](mailto:info@anothercupdevelopment.org)

Struwig, M. Struwig, F.W and Stead, G.B. (2001). *Planning, reporting and designing research*, South Africa: Pearson.

Public-Private infrastructure Advisory facility, (2012). Public-Private Partnerships Basics and Principles of a Public-Private Partnerships Framework.

Shen, L.Y. Platten, A. & Deng, X.P. (2006). *Role of public private partnerships to manage risks in public sector projects in Hong Kong*, International Journal of Project Management,

Samii, R. Van Wassenhove, L.N. and Bhattacharya .S. (2002). An innovative public private

The Ministry of Foreign Affairs of the Netherlands, (2013). *Public – private partnerships in Developing Countries a systematic Literature Review*. Management, Vol. XIII, No. 4

The United Republic Of Tanzania, (2009), *National Public Private Partnership (PPP) Policy*

The Ministry of Finance Singapore, (2004). *Public-Private Partnerships in Housing Hand book Version 1*.

The Boston Consulting Group, (2013). *Strategic Infrastructure Steps to Prepare and Accelerate Public-Private Partnership Sector Provision of Affordable Rental Housing in Alberta*. Faculty of Environmental Design University of Calgary.

Tsenkova, S. and Witwer, M. (2011). *Bridging the Gap: Policy Instruments to Encourage Private Sector Provision of Affordable Rental Housing in Alberta* Faculty of Environmental Design University of Calgary

Tweneboa, A. (2011). Factors Shaping Real Estate Development In Ghana, A Presentation for Ashesi University' s Real Estate Class Ghana Real Estate Developers Association

UN-HABITAT, (2011).Ghana Housing Profile

United Nations Economic Commission for Europe, (2008). Guidebook on Promoting Good Governance In Public-Private Partnerships

UN-HABITAT, (2011). Public-Private Partnerships in Housing and Urban Development. Published in Nairobi

United Nations, (2008). Guidebook On Promoting Good Governance In Public-Private Partnerships, New York and Geneva.

Young, K. YingYi, C. and Ibbs, W. (2009). *Towards a Comprehensive Understanding of Public Private Partnerships for Infrastructure Development*, California management review vol. 51, no. 2

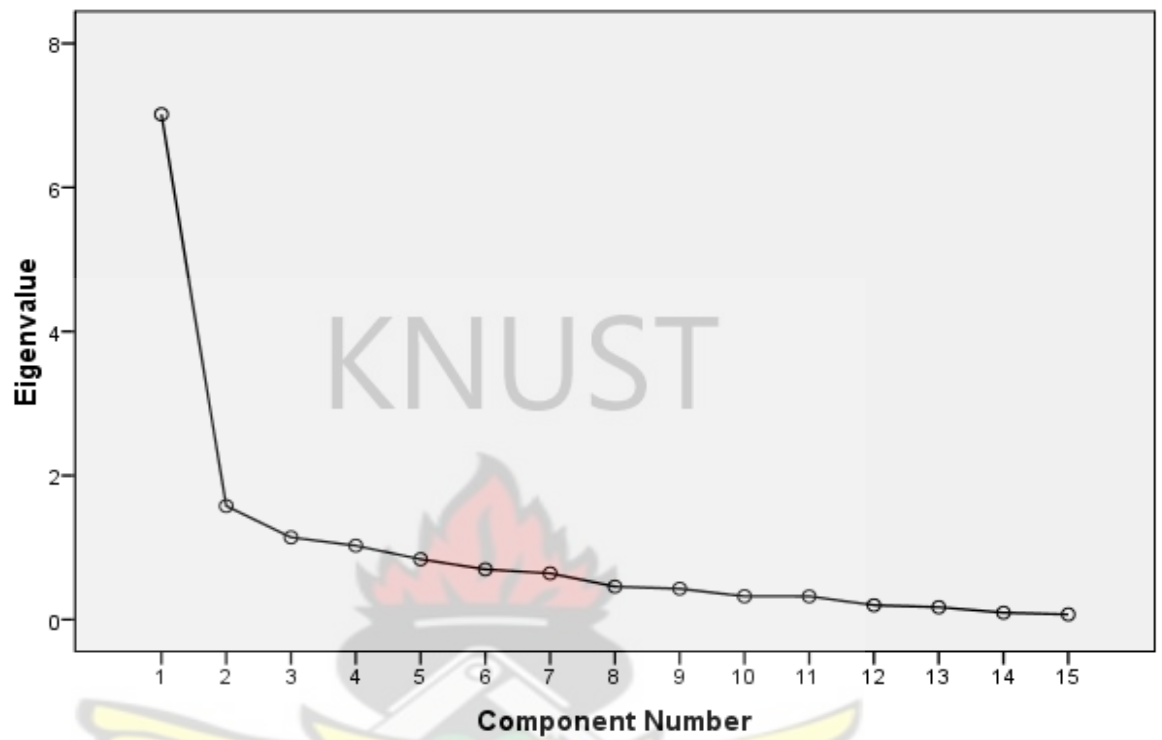
## APPENDIX 1

**Table A1: Total Variance Explained (Strategies)**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cum. %	Total	% of Variance	Cum. %	Total	% of Variance	Cum. %
1	7.015	46.769	46.769	7.015	46.769	46.769	3.626	24.171	24.171
2	1.577	10.511	57.279	1.577	10.511	57.279	3.029	20.195	44.366
3	1.141	7.605	64.884	1.141	7.605	64.884	2.537	16.913	61.279
4	1.025	6.835	71.719	1.025	6.835	71.719	1.566	10.44	<b>71.719</b>
5	0.837	5.583	77.301						
6	0.697	4.645	81.946						
7	0.641	4.275	86.221						
8	0.457	3.049	89.269						
9	0.428	2.853	92.123						
10	0.323	2.155	94.278						
11	0.322	2.147	96.425						
12	0.199	1.328	97.753						
13	0.171	1.142	98.895						
14	0.095	0.632	99.527						
15	0.071	0.473	100						

Extraction Method: Principal Component Analysis.

**Scree Plot**



**Table A2: Rotated Component Matrix<sup>a</sup> (Strategies)**

	Component			
	1	2	3	4
Involvement of experts inputs from both the private and the public sectors	0.639			
Provision of funds by the public sector for the private sector to execute the projects	0.706			
Collaboration with communities in housing schemes development	0.63			
Risk sharing between private and public sectors in housing delivery		0.613		
The public sector provides the performance specifications for the Private sector to design and build			0.537	
The private sector uses equity funds to finance housing schemes while the public sector supervises the execution of the housing scheme				0.783
The private sector constructs and finances the capital cost of an asset for the public sector to operate.			0.842	
Transfer of public sector tasks to private partners for a period (Design-Build-Finance-Maintain-Operate (DBFMO))		0.904		
Developing operational guidelines and tools for PPP projects by both partners	0.672			
Developing PPP projects and managing capacity of both partners.	0.607			
The removal of any regulatory obstacles in PPP arrangement			0.462	
The creation of broad public and political support for PPP	0.866			
Identifying potential resources in private sector for PPP arrangement			0.52	
Identifying potential development companies for PPP arrangement		0.743		
Matching the expertise from both partners			0.64	
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 11 iterations.				

**Table 4.3: Rotated Component Matrix (Strategies)**

Source: Field Study, 2014

Table A3: Challenges (Relative Importance Index)

	N	Sum	Mean	RII	Ranking
Politicization of housing issues in the country	62	271	4.37	0.87	1
Weak Financial strength	62	260	4.19	0.84	2
Inadequate domestic capital markets	62	247	3.98	0.80	3
Lack of long-term financing instruments and appropriate risk sharing mechanisms.	62	246	3.97	0.79	4
Lack of public awareness about PPP benefits	62	243	3.92	0.78	5
Inefficient and unsustainable credit delivery to the housing sector.	62	242	3.9	0.78	6
Lack of institutional capacity to undertake large and complex projects	62	241	3.89	0.78	7
Lack of comprehensive policy, legal and institutional frameworks.	62	231	3.73	0.75	8
Inadequate information on public private partnerships program	62	230	3.71	0.74	9
poor design implementation resulting from inability to assess investment proposals	62	230	3.71	0.74	10
Lack of transparency in PPP arrangements	62	228	3.68	0.74	11
ineffective coordination among housing Agencies	62	222	3.58	0.72	12
The partners often have divergent strategic and operational realities	62	221	3.56	0.71	13

Source: Field Study, 2014

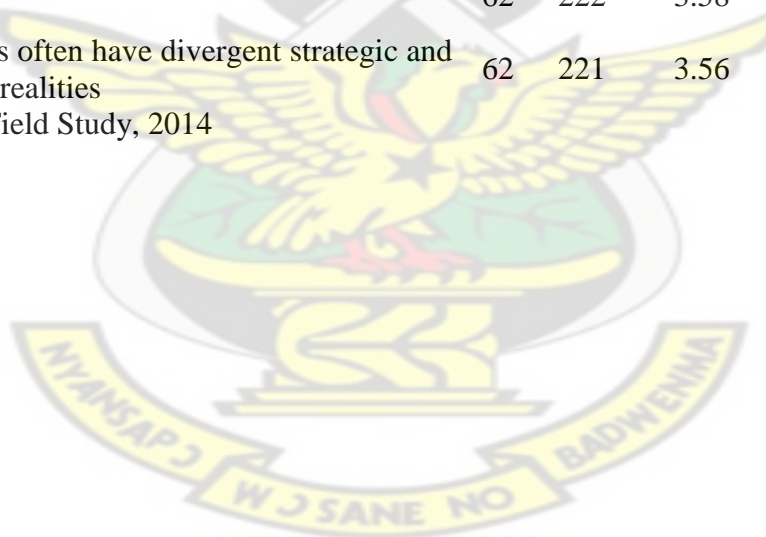


Table A4: Success Factors (Relative Importance Index)

	N	Sum	Mean	RII	Ranking
Effective Constant communication between partners	62	245	3.95	0.79	1
Adequate legal framework and stable political environment	62	238	3.84	0.77	2
Continuous project monitoring and control	62	237	3.82	0.76	3
Commitment of partners	62	232	3.74	0.75	4
Proper planning and infrastructure network	62	229	3.69	0.74	5
Proper project financing strategy	62	226	3.65	0.73	6
Transparent and efficient procurement process	62	225	3.63	0.73	7
A common vision and trusted relationship between partners	62	221	3.56	0.71	8
A sound regulatory framework	62	220	3.55	0.71	9
Good information dissemination and communication system	62	219	3.53	0.71	10
Development policy and institutional framework	62	217	3.5	0.70	11
A Permanent government involvement	62	216	3.48	0.70	12
Compelling managerial capabilities	62	214	3.45	0.69	13
No political pressure and interference	62	214	3.45	0.69	14
Equitable allocation of risks	62	213	3.44	0.69	15
Integration of effective measures	62	212	3.42	0.68	16
Community participation and support	62	205	3.31	0.66	17

Source: Field Study, 2014

## APPENDIX 2

### **Kwame Nkrumah University of Science and Technology Department of Building Technology**

#### **SURVEY QUESTIONNAIRE**

This research is a Postgraduate level research entitled “A Study into Public Private Partnership in affordable housing delivery.” Its aim is to thoroughly explore the best way of adopting public private partnerships in the affordable housing delivery in order to scale down the mounting housing deficit in Ghana.

**Kindly respond to the questions by ticking (✓) the appropriate response.**

1. Please kindly indicate your institution  
☐ GREEDA  
☐ KMA  
☐ State housing Company  
☐ SSNIT
2. How long have you been with this institution?  
☐ Less than 10 years  
☐ 10-20 years  
☐ 20 -30 years  
☐ Over 30 years
3. What is your highest level of qualification  
☐ HND  
☐ First Degree  
☐ Master  
☐ PhD
4. How would you rate the effectiveness of the following strategies in the adoption of PPP in affordable housing delivery in Ghana? Kindly use the scale: **1= Not effective, 2=Less effective 3 = moderately effective 4= Effective 5= Very effective**

	Strategies	1	2	3	4	5
1	Involvement of experts inputs from both the private and the public sectors					
2	Provision of funds by the public sector for the private sector to execute the project					
3	Collaboration with communities in housing schemes development					
4	Risk sharing between private and public sectors in housing delivery					
5	The public sector provides the performance specifications for the Private sector to design and build					
6	The private sector uses equity funds to finance housing schemes while the public sector supervises the execution of the housing scheme					

7	The private sector constructs and finances the capital cost of an asset for the public sector to operate.					
8	Transfer of public sector tasks to private partners for a period (Design-Build-Finance-Maintain-Operate (DBFMO))					
9	Developing operational guidelines and tools for PPP projects by both partners					
10	Developing PPP projects and managing capacity of both partners.					
11	The removal of any regulatory obstacles in PPP arrangement					
12	The creation of broad public and political support for PPP					
13	Identifying potential resources in private sector for PPP arrangement					
14	Identifying potential development companies for PPP arrangement					
15	Matching the expertise from both partners					
<b>If others (please specify)</b>						

5. What is the severity of the following challenges in the implementation of PPP in affordable housing delivery? Use the scale: 1=Not severe, 2. = Less severe, 3= Moderately severe, 4= Severe 5= Very severe

	<b>Challenges</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1	Inadequate information on public private partnerships program					
2	Lack of institutional capacity to undertake large and complex projects					
3	Weak Financial strength					
4	Lack of comprehensive policy, legal and institutional frameworks.					
5	poor design implementation resulting from inability to assess investment proposals					
6	Lack of long-term financing instruments and appropriate risk sharing mechanisms.					
7	Inadequate domestic capital markets					
8	Lack of transparency in PPP arrangements					
9	Inefficient and unsustainable credit delivery to the housing sector.					
10	ineffective coordination among Housing Agencies					
11	Politicization of housing issues in the country					
12	The partners often have divergent strategic and operational realities					
14	Lack of public awareness about PPP and its benefits					
<b>If others (please specify)</b>						

6. How effective are the following success factors in the adoption of the public private partnership in affordable housing delivery? **Use the scale: 1= Not effective 2=Less effective 3= moderately effective 4= Effective 5= Very effective**

	<b>Success Factors</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>1</b>	A Permanent government involvement					
<b>2</b>	A sound regulatory framework					
<b>3</b>	Commitment of partners					
<b>4</b>	A common vision and trusted relationship between partners					
<b>5</b>	Proper project financing strategy					
<b>6</b>	Good information dissemination and communication system					
<b>7</b>	Continuous project monitoring and control					
<b>8</b>	Compelling managerial capabilities					
<b>9</b>	No political pressure and interference					
<b>10</b>	Community participation and support					
<b>11</b>	Proper planning and infrastructure network					
<b>12</b>	Development policy and institutional framework					
<b>13</b>	Effective Constant communication between partners					
<b>14</b>	Equitable allocation of risks					
<b>15</b>	Transparent and efficient procurement process					
<b>16</b>	Adequate legal framework and stable political environment					
<b>17</b>	Integration of effective measures					
<b>If others (please specify)</b>						