END-USER STAKEHOLDERS' MANAGEMENT FRAMEWORK FOR PUBLIC PRIVATE PARTNERSHIP ROAD PROJECT IN NIGERIA

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DEDICATION

This dissertation is dedicated to Almighty Allah my creator, my strong pillar, my source of inspiration, understanding, knowledge and wisdom. He has been the source of my strength throughout this program.

DECLARATION

This thesis submitted under the University of Salford requirements for the award of a PhD degree by research. This thesis or any part therein has not formerly been submitted in any form to the University or to any other academic or professional institution whether for publication or for the purpose of assessment in any field of research. I confirm that the intellectual gratified of this thesis is as a result of my personal efforts and no other individual. As at this date copyright is owned by the researcher

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Luqman Olalekan Toriola-Coker

Date: ……2018

LIST OF ABBREVIATIONS

AT Agency Theory

ARM Asset Resource Manager

BLT Build, Lease, and Transfer

BLTM Build, Lease, Transfer, and Maintain

BOOR Build, Own, Operate, and Remove

BOO Build Own Operate

BOT Built Operate Transfer

BPE Bureau of Public Enterprise

CEM Customer Experience Management

CFA Confirmatory Factor Analysis

CR Critical Realism

CS Case Studies

DBB Design, Bid Build

DBFO Design, Build Finance and Operate

DBFOOMT Design, Build, Finance, Own, Operate, Maintain, Transfer

DBFOT Design, Build, Finance, Operate, Transfer

DBO Design, Build Operate

DCMF Design, Construct, Maintain, and Finance

DFI Development Finance Institution

ECN Expropriation, Confiscation and nationalization

FAAN Federal Aviation Authority of Nigeria

FGN Federal Government of Nigeria

FMW Federal Ministry of Works

GDP Gross Domestic Product

ICE Internal, Connected and External

ICIR International Centre for Investigative Reporting

ICRC Infrastructure Concession Regulatory Commission

ICRS Infrastructure Concession Regulation Commission

KMO Kaiser-Meyer-Olkin

LAMATA Lagos Metropolitan Area Transport Authority

LROT Lease, Renovate, Operate, and Transfer

LRMT Lagos Urban Rail Mass Transit

LASG Lagos State Government

LASUTH Lagos State University Teaching Hospital

LCC Lekki concession company

LIP Lagos Infrastructure Project

LTC Lagos Tolling Company

LWC Lagos Water Corporation

MCA Mega Construction Projects

MMA Muritala Muhammed Airport

NCP National Council of Privatisation

OB Organisation Behaviour

OandM Operation and Maintenance

PFI Private Finance Initiative

PPP Public Private Patnership

RS Research Strategies

SA Stakeholder Analysis

SPV Special Purpose Vehicle

SM Stakeholder Management

SRCC Strike, Riot and Civil Commotion SRCC

VHT Vehicles-Hours Travelled (VHT)

VMT Vehicle-Miles Travelled (VMT)

WHO World Health Organization

ABSTRACT

Many developing nations such as Nigeria have embraced PPP approach in order to bridge their significant infrastructural gaps such as prisons, roads, schools, rail tracks and train systems, among others, through Public Private Partnership (PPP) schemes which have gained international recognition in the last two decades. One of the major factors militating against PPP projects successful growth and development in Nigeria and some part of the world is poor end-user stakeholder management.

There is a paucity of research on end-user stakeholder management in PPP projects within Nigerian context despite significant efforts on researchwhich informs this study aim to develop a framework that will encapsulate the strategic approach for successful management of the diverse interests of end user stakeholders of the PPP road projects in Nigeria.

The pragmatism philosophical paradigms with the mixed method approach were adopted. The case study and survey strategies were used with end-users and professionals that have worked on the PPP projects as target respondents. The two cases used are Lekki-Epe PPP toll road and Apakun Muritala Muhammed PPP toll road. Eighteen interviews were carried out and analysed using thematic analysis (qualitative). A total number of 282 completed questionnaires were retrieved and analysed using reliability and factor analysis (quantitative).

The thematic analysis resulted in 29 themes which were used to create the 33 variables used in questionnaire. Reliability analysis of questionnaire data revealed five variables as unreliable. Factor analysis of the remaining 28 variables revealed seven valid underlying factors which affects end-users stakeholders' management framework in PPP road project in Lagos Nigeria. These factors are: safety efforts by the contractor; socio-economic impact; benefit realisation and community participation; environmental impact; public utilities compensation; integration with the host community; and integration with political groups.

Considering all these factors, it can be concluded that the end-users stakeholders believed that their active involvement in decision-making on PPP projects from inception to

conclusion is a major solution to the problem of end-user stakeholder's agitation in Nigeria.

CHAPTER 1 INTRODUCTION

1.1 Background to the Research

In the last two decades, the procurement of public infrastructures such as prisons, roads, schools, rail tracks and train systems, sewerage systems, power plants among others, through Public Private Partnership (PPP) schemes has gained international recognition (Jin and Zhang, 2011; Demirag *et al.*, 2011). PPP is an infrastructure delivery approach, which combines the effective managerial expertise and finance of the private sector with public sector supervisory and regulatory capabilities (Li and Zou, 2011; Oyedele, 2012). As a procurement methodology, PPP not only allows government to finance capital projects off her balance sheet (Ping and Bing, 2014; Zhang, 2006), it encourages the transfer of risks associated with capital projects, from the public sector to the private sector party (Zou et al., 2014; Gatti, 2008; Delmon, 2009). Many developing nations such as Nigeria have also embraced the PPP approach in order to bridge their significant infrastructural gaps (Ibem, 2011; Kennedy et al., 2015). According to Babatunde *et al.* (2016), the Nigerian government from Federal, State and Local levels have invested well over ₦10 trillion (₦ is symbol for naira, which is Nigeria's currency) in infrastructure investments through PPP schemes. However, with an estimated annual investment of ₦32billion required to achieve Nigeria's vision 2020 development target (Babatunde *et al.*, 2012), PPP is poised to remain one of the major driver of the nation's (Olaseni and Alade, 2012) infrastructure policies in years to come.

Despite the wide acceptability of PPP schemes in many Nigerian states, especially Lagos State (commercial capital), Abuja (official capital of Nigeria), Rivers State, Cross River State, Akwa Ibom State, among others (Babatunde *et al.*, 2016), one of the major challenges militating against PPP projects successful growth and development in Nigeria and some part of the world is poor end-user stakeholder management (Amadi *et al.*, 2014; Abednego and Ogunlana, 2006). A major stakeholder in infrastructure projects is an end-user (Olander, 2007) so their viewpoint is essential for successful infrastructure projects. Failure to address issues concerning end-user needs may arise to stakeholder opposition and can cause project disappointment (El-Gohary et al., 2006; Majamaa et al., 2008). Without a doubt, stakeholder hostility may be one of the major reasons for project failure (El-Gohary et al., 2006; Ng et al., 2013. see figure 1.2). Any individual or organisation

with vested interest (in terms of power, legitimacy and urgency) in project's operating environment and also in the success of any projects is regarded as a stakeholder (Olander, 2007). The effects of infrastructure project on end-user stakeholders are not only for short or medium periods but also long period; the main task of infrastructure project is to ensure community benefits are delivered over the project lifecycle in order to realise overall success. Infrastructure projects needed to become sustainable because of their long lifecycles interms of success measures (Kumaraswamy et al., 2007). Meeting the desires and objectives of the present without involving future generations is sustainable development which indicates the ability to meet the needs of end-user (World Commission on Environment and Development, 1987). Hence, the project should be sustainable not only for the present but also for future generations by balancing social dimensions, environmental and economic, known as the triple bottom line (TBL).

The effect of this challenge is more pronounced because of corruption, ever growing population leading to rapid demand of public service, and economic wealth (Opawole et al., 2017). This challenge has been highlighted by Ncube (2010) who argue that poor management of end-users interests in Build-Own-Operate-Transfer (BOOT) projects, a type of PPP, is a common theme in many African nations. Lehtiranta (2015) described end-users as the indirect employers of businesses involved in any construction project and they are also the forgotten ultimate customers of the industry. As it currently stands, the concerns of stakeholders for or against PPP projects is a deciding factor, as the World Bank *suggested "a wider gap between the expectations of the governments and the private sector on what is reasonable and acceptable"* (El-Gohary *et al.,* 2006: p.595). The marginalisation of end-user stakeholders is varied and significant (Pernille Eskerod and Anna Lund Jepsen, 2013). This has led to agitations which are generally attributed to insufficient end-user stakeholders' consultation that often bedevils many PPP projects in Nigeria (Ajudua and Okonkwo, 2014). A good example of this is the wide spread agitation and litigation (Aje and Ogunsemi, 2011) that greeted toll collection on Nigeria's 1st PPP toll road located in Lekki-Ajah express-way of Lagos State (see figure 1.2). Knowing fully well that an infrastructure project like toll road has significant impact on the economic activity and the quality of life, hence its achievement is very vital (Rohman et al., 2017). For several years, a developing country like Indonesia has been thoroughly implementing PPPs in its infrastructure growth, particularly in toll road projects. A build-operate-transfer (BOT) scheme was arranged to complete a total 3,450km toll road by 2025 (Wibowo,

2005). Regrettably, real development has not been trailed by this plan. Even with the existence of Indonesian toll road since 1978, only about 950km of toll roads are presently in operation (Badan Pengatur Jalan Tol, 2016). End-user agitations are observed as the main problem in toll roads projects.

Juliana, a resident of Epe area in Lagos State who passes through the toll gate daily because of her business on Lagos Island spoke with vanguard newspaper on the 7th of January 2012, about her unpleasant practices she goes through, according to her,

A common man on the street can no longer enjoy anything in Lagos and Nigeria since the commencement of the toll road, life has become miserable because I can no longer go out at desired time because of the traffic to the toll gate as shown in figure 1.1(Vanguard Newspaper, 2012).

Figure1.1: Traffic gridlock at Lekki toll gate

Source: Vanguard Newspaper (2012)

She speaks further that after being held in the traffic for two (2) hours when she has been charged exorbitantly by the commercial drivers who have increased their fares by 300% making the end-users to bear the burden of the tolling. She stressed further that "If any end-user stakeholders fall sick, the person can die because there is no provision for any hospital or health centre along the toll road. The closest hospital is on Broad Street in Lagos Island which will take about 30-40 minutes' drive from the toll gates" without further traffic. Obviously, community sustainability has been joined with corporate social

responsibility as the ethical responsibilities in the social aspect due to the performance of corporates' economic activity (Almahmoud and Doloi, 2015). The social aspect can be related to organisation or society according to Oxford Dictionary (2016).

Commenting on the issue, counsel to the residents of host community, Barrister Ebun Adegboruwa also granted an interview with the same newspaper on the same day saying "*There is concentration of the affluent. So, it is a faulty premise to bandy the argument that the toll is targeted at the rich. On your way to Epe, you will find not less than 135 indigenous communities; the masses are farmers, fishermen, cattle rearers and jobless people in the lower cadre that have to use this road"* Source: Vanguard Newspaper (2012)

This feeling of end-users stakeholders is that of imposition of high costs of toll charges in the pretence of PPP, this often leads to widespread negative reactions and agitation (Ncube, 2010). According to Gregory *et al.* (2003), end-user stakeholder opposition mostly emerge in projects where the public sector adopts a 'user-pays' PPP approach. A major reason for this is the conflict between the revenue and profitability goals of the project consortium and the economic interests of the end-users (Smyth, 2008). Opting for user-pays (tolling) by the government, is to bridge the gap between inadequate government funds and investment needs (Jaensirisak; 2005). A good example of such practice for over 100years is Norway, where tolling is used as a means of complementing constrained government funding (Poole Jr, 2000; Lossa and Martimort, 2013). The user-pays model transfers the entire cost of the project to the end-users (mostly private and commercial motorists) over the life of the concession.

Predictably, such decisions result in stiff resistance and public outcry (Yuan et al., 2009). The prevalence of end-user stakeholder opposition to PPP projects often vary across project types (Mostafa and El-Gohary, 2014). While PPP projects such as hospitals, schools, prisons among others may not usually attract vehement opposition from end-users (Zitron, 2006; Lv and El-Gohary, 2016); such is not always the same with projects like toll highways, sewerage systems, hazardous waste projects, water projects among others (Aziz, 2007; Gunnigan and Rajput, 2010). In a typical PPP toll road project, aside complaints like high toll charges (Cheung, 2009), other issues such as longer travel hours and traffic congestion during the construction stage of the project (Awodele et al., 2012), resistance to payments of tolls on road projects which should be government's obligation

(Norton and Blanco, 2009), compensation packages and developmental issues (Gupta and Agrawal, 2013) among others often raise enormous tension concerning PPP road projects globally (Cheung *et al.,* 2010) and Nigeria in particular (Amadi *et al.,* 2014). Managing the end-users stakeholders requires incessant interactions between the members of the public and the project organisation (Pernille Eskerod and Anna Lund Jepsen, 2013) so that common development of understanding can be achieved between the two parties and any other stakeholders involved.

Babatunde *et al.* (2016) argue that stakeholders' resistance relating to land and other communal disputes was identified as one of the problems that stalled the Lagos/Ibadan express road that cut across the Lagos, Ogun and Oyo States axis of the nation, which was awarded on PPP premise by the Nigerian Government. Stakeholders' opposition is a global phenomenon and remains the key reason behind the failure of many PPP initiatives (Banaitienė *et al.,* 2011; Yuan, *et al.,* 2009). In general, stakeholders are defined as individuals, groups and organisations that can affect or be affected by the construction or operations of a project (Mostafa and El-Gohary, 2014; Freeman, 2010; Mok *et al.,* 2014). Emerging from stakeholder theory, stakeholder management came to light for the first time in Stanford Research Institute in 1963 (Schepper *et al.,* 2014). However, PPP being a multi-participant procurement approach, it consists of numerous stakeholders namely: public sector, lenders, project company, project host communities, architect, construction and operations contractors, insurers, end-users among others (Hofmeister and Borchert, 2004; Delmon, 2011; Ping and Bing, 2014; Li and Zou., 2011). Thus, managing the interests of stakeholders in such complex (Schepper *et al.,* 2014) and dynamic arrangement can be quite challenging.

Recently, researchers(Lim et al., 2005; Lv and El-Gohary, 2016; Hill and Jones, 2007; Yuan *et al.,* 2009; Chung *et al.,* 2010; Harris, 2010; Akintoye *et al.,* 2011) have argued for more robust strategies for addressing end-user stakeholder opposition in PPP projects especially on toll highways The only solution to this particular problem is to find a better way to agree with individuals or entities connected to the project (Pernille Eskerod and Anna Lund Jepsen, 2013) in order to improve the end-users stakeholders' management involvement.

1.2 Rationale of Research

Despite the significant research efforts (Mostafa and El-Gohary, 2014; Schepper *et al.*, 2014; Freeman, 2010) towards examining end-user stakeholder management in PPP projects generally, there is a paucity of research on end-user stakeholder management in PPP projects within Nigerian context (Olusola et al., 2012). There is however researches that provides suggestions on end-user generally on PPP projects in other countries (Lehtiranta, 2015). End-user stakeholder management is the underlying principle of public affairs management, which is relevant to both symmetric and asymmetric method of communication (Williams and Adams; 2013). The management is important to the success of every single project in all organisations (Waligo et al., 2014). People use this method to win support for others and make sure that project succeed where others fail (Fletcher et al., 2010). For instance, Mostafa and El-Gohary (2014) in their research argued for more inputs from stakeholders in order to achieve success in PPP projects. The study suggested a semantic model and taxonomy of key themes (stakeholders data information, resolving differences among others) underpinning stakeholder participation in PPP projects. These can be categorised as primary, secondary and assumption. Pernille Eskerod and Anna Lund Jepsen, (2013) described that the primary stakeholder's data can be created for specific purpose, whereby making the stakeholders assessment involved in the on-going project through interactions with project stakeholders or by observations. These two ways can be achieved through workshops, interviews, e-mail, meetings, questionnaires and other sources of communications (Saunders, 2011). The secondary data is made for other purposes knowing fully well the information already available about the project or the project stakeholders (Amadi et al., 2014). Such information is available in the official documents like project business case and contract documents, in project role descriptions or project charter (Chung et al., 2010). Further information can be found in minutes of the project meetings where stakeholders are involved (Freeman, 2010). The final one is to create data by assumptions about the stakeholders without collection of data. The assumption might concern stakeholder's procedural interactions in terms of fairness, previous experience, present and past behaviours (Freeman, 2010). Thinking about stakeholders on a particular project is sometimes important. End-users stakeholders disengaged their services because they felt neglected, forgotten or unfairly treated (Pernille Eskerod and Anna Lund Jepsen, 2013). Solving these problems, a follow-up plan/framework needs to be designed to counter the challenges expected from PPP

projects (Yuan et al., 2009). Part of the model is deployed in a knowledge base used for recommending appropriate stakeholder involvement tools. Despite the strong contributions of studies (Pernille Eskerod and Anna Lund Jepsen, 2013) on PPP stakeholder management, a major flaw is that there is no specific focus on end-users stakeholders' management on PPP road projects.

Schepper *et al.* (2014) in a recent study examined end-user stakeholders' management in PPP projects using a comparative analysis of four PPP case studies In Belgium. Findings from the study suggest more complexity in allocating stakeholders responsibilities between public and private sector parties due to the dynamic nature of PPP projects. In resolving this problem and balancing the divergence between proactive and reactive end-user stakeholders' management responses in PPP, the study proffers a dual end-user stakeholder management tool. The tools are the identification of more governance structures and ex-ante (before-the-event) end-user stakeholder inclusion, in order to mitigate stakeholder issues (Mok et al., 2015). Although the study adopted a single case study strategy which is often explorative and in-depth, its limitation lies in the fact that it focuses more on top managers as the most important in stakeholder theory (Hampton et al., 2012). This assumption is wrong since top managers rely on a number of mid-level and low-level employees to play its role in achieving success on PPP projects (Freeman, 2010). The study also failed to examine the critical role of end-users in achieving the project economic objective.

In another related study on Stakeholder management (SM) in mega construction projects (MCP), Mok *et al.* (2015) conducted a systematic review of literatures in (SM). The study identified four major research themes in stakeholder management namely, "Stakeholder engagement", "stakeholder management process", "Stakeholder interests and influences" and "stakeholder analysis methods". It argues that most studies on SM have focused on small scale projects and therefore proposed a social network approach in managing stakeholders in mega construction projects (Freeman, 2010). Asides the fact that the study focused primarily on managing interests of project participants such as designers, builders, architects (Lim et al., 2005), its major short coming is that the social network approach suggested in the study is situated within the context of mega construction projects as against PPP projects (Yang et al., 2011). It is important to note that the stakes in PPP projects are often higher, given the fact that a wider network of stakeholders with

divergent interests are not frequently involved (Pemsel et al., 2010) even with the negligence of end-users.

Furthermore, Smyth and Edkins (2007) examine how relationships are managed among members in a PPP private consortium (project Company) and the relationship between the project company and the public sector client. The study found that trust and confidence remain a major consideration for smooth relations among the participants and these were drawn against thirty relationship management dimensions (Hofmeister and Borchert, 2004) (classic market relationships, special market relationships, law-based relationships, mega relationships among others). This study concludes by suggesting more strategic and tactical considerations for proactive management of the diverse relationships in Private Finance Initiative (PFI)/PPP projects (Pitt et al., 2006). Despite the contributions of this study to stakeholders' relationship management in PPP projects, like many of the earlier studies, the scope of the study did not cover end-users for whose usage of PPP project is procured (Olusola et al., 2012). The study fails to consider more proactive strategies for incorporating the interests of project end-users at the conception of the project (Freeman, 2010); in order to reduce end-user opposition once the project commences operations. Other studies such as Fischbacher and Beaumont (2003); Ping and Bing (2014); Smyth (2008); Awodele et al., (2011); Hampton (2012), Yang et al. (2011) among others have also examined stakeholder management in PFI/PPP and constructions projects in general. But most of the studies have also failed to specifically investigate end-users interests in PPP projects.

Despite the extensive contributions of various studies on stakeholder management in PPP projects with suggestions for strategies, tools and frameworks for addressing such (Mostafa and El-Gohary, 2014; Ping and Bing, 2014; Schepper *et al.,* 2014; Smyth and Edkins, 2007) a systematic and critical review of the studies have revealed that research on end-user stakeholders is scarce and only remains at the background (Pemsel et al., 2010). This can be noticed from the fact that many of the studies only focused on other stakeholders in PFI/PPP projects such as the public sector clients, contractors, lenders and other members of the private consortium (Freeman, 2010). Also, many of the studies on PPP stakeholders management have only examined projects executed in countries such as UK, Hong Kong, China and Belgium (Smyth and Edkins, 2007; Ping and Bing, 2014; Chueng, 2009; Yuan, 2009). Stakeholders' management in PPP projects in other

developing countries such as Nigeria for example have not been examined (Kennedy et al., 2015), despite the nation appearing as one of the major destination of PPP investments in Africa.

However, according to the literature review, research that explores robust framework for managing the interests of end-user stakeholders in PPP particularly in Nigeria is still scarce (Babatunde et al., 2016). This has represented a significant gap in knowledge, which this study had filled. Therefore, this study emerges with the overarching aim of developing a framework that will encapsulate the strategic approach for successful management of the diverse interests of end user stakeholders of the PPP road projects in Nigeria. The basic infrastructure challenges are specifically given attention in line with global trends by both federal and state governments of Nigeria via the intervention of the private sector in infrastructure growth through PPPs (Babatunde et al., 2016). This has given birth to over 51 infrastructure projects with the involvement of PPPs between 1990 and 2009 (Oluwakiyesi, 2011). Table 2.2 and 2.3 shows infrastructure projects that are in pipeline with the intervention of PPPs as at 2013 and 2014 respectively (Infrastructure Concession Regulatory Commission, 2014)

According to Al-Tmeemy et al., (2011), some features are regarded as the ideas and contributions, which results either directly or indirectly in the success of a project. This methodology is an approach that tries to make explicit, the key areas that are important for success (Boynton and Zmud, 1984). Muller and Turner (2007) argue that salient factors are components of a project that can be influenced to maximize the chances of success. In this regard, identifying the various causes that are important in reducing end-user stakeholders' anxiety in projects remains a significant strategy for avoiding setbacks which are often created by end-user stakeholder opposition (Amoako-Gyampah, 2004). Babatunde et al., (2016) in his research described the true reflective of implementation of PPP in Nigeria as ill- politically motivated where the synergy between public and private sector in the application of PPP projects is not always cordial. This made implementation of Nigeria PPP projects susceptible to litigation, controversies among others. Perceptions of stakeholder differences in terms of PPP projects implementation in Nigeria are few, this could be attributed to different opinions and priorities as to the features they consider suitable (Babatunde et al., 2016). It can also be through the experiences of stakeholders in

Nigeria PPP projects coupled with the differences in the condition of respective PPP projects among others.

Using one or two case studies of toll road projects which has been tipped to account for a high percentage of the stakeholders agitations in Africa, which had provided valuable insights into issues relating to end-user interests in Nigeria PPP projects. However, in order to execute a successful PPP projects, some basic pre-requisites must be available to facilitate the developments; among them are serious commitment with adequate technical strength; reliable concession plan with due diligence; bankable project with adequate skakeholders involvement; favourable economic environment; strong political will with dedicated private partners and government support with enough legislation among others (Babatunde et al., 2016). However, regardless the fact that PPP is a powerful instrument for realising much needed road infrastructure and preventing the incessant traffic congestion and environmental conditions (Delmon, 2009), the attitudes of end-users stakeholders towards the tolling charges should not be overlooked (Olaseni and Alade, 2012). Therefore, the government of Nigeria need to recognise the end-users stakeholders' attitude which has become serious impediment (Odeck and Kjerkreit, 2010) for the previous and present government in power in order to win future election. In most developing countries like Nigeria, where concession model of PPP had been newly established (Akinsiku et al., 2014), with number of significant ongoing projects which are prone to legal and administrative challenges from inception posing significant threats to private party's investment (Opawole and Jagboro,2016). The lack of economic factors and socio-cultural knowledge are some of the challenges Nigeria is facing in terms of managing end-user stakeholders need in PPP. Several researchers in Nigeria, Adeniyi et al. (2011), Sanni (2012), Famakin et al.(2012) and Babatunde et al. (2012, 2015, 2016) through their studies unanimously observed that empirical studies on challenges affecting concession scope assessment cannot be overlooked, it has to be scrutinised in terms of capabilities of PPP in relation to the function of environment based on interview surveys, case-study approach and questionnaire (Opawole and Jagboro, 2016). This will demonstrate multidisciplinary and diversity qualities of PPP strengths and weaknesses on end-user stakeholder.

The significant rationale behind the selection of projects considered in this thesis are the initial sets of PPP infrastructure projects awarded by both State and Federal governments,

which are all prone to end-user stakeholder's agitations irrespective of provision of good roads under noticeable problematic local contests within the local community (Nwangwu, 2016). Toll road infrastructure development in Nigeria lacked skill and expertise through only public sector (Gidado, 2010). Therefore, Nigerian government found it difficult to meet her transportation requirements because of insufficient capacity in managing the technical expertise in the public sector. This has recorded some abandoned; unsuccessful and collapsed infrastructure in many parts of the country which made it difficult for other sectors to demand for infrastructure requirements due to government limited resources (AfDB, 2010). Three (3) out of the four (4) selected projects are road projects with two out of the three (3) specified as PPP toll road projects constructed and upgraded under indigenious challenges including abundant rainfall, poor terrain and high volume of traffic among others. PPP in the aviation sector was selected as one of the four itemized projects through the upgrading and reconstruction of nation's airport through concession as a deliberate strategy in bridging infrastructural gap (Oyewobi et al., 2012). Thus, Muritala Muhammed Airport Terminal 2 (MMA2) exemplifies the first succeful PPP in aviation sector. The development of suitable transport infrastructure is orchestrated by significant investment necessities. Therefore, private sector participation towards the upgrading of transport infrastructure is exceedingly important in order to avoid unnecessary wastage by the government (Ernst and Young, 2012). Inability of government to raise substantial funds for gigantic infrastructure projects is becoming more worrisome (Cheung et al., 2009). PPP is the only method that can address such challenges, thereby facilitating the development of more transport infrastructure projects. Quite a lot of researchers in Nigeria (Idoro et al., 2007; Ojo, 2009; Dada, 2013) discovered the alternatives of traditional procurement approaches as utmost predominant methods of executing construction projects in Nigeria. Traditional procurement methods of projects delivery have suffered major challeges. Some of the challenges are poor workmanship; persistent cost overruns; additional payment from contractors claim; performance shortfall and construction dealys among others (Flyvbjerg et al., 2003; Van Wee, 2007; Siemiatycki, 2009). PPP is globally supported by many scholars in procuring transport infrastructure projects that can stimulate better collaboration for both private and public sectors.

The condition of Nigeria's infrastructure projects particularly in the transport sector has been recently subjected to debate by stakeholders in the emerging economy (Lucas, 2011). The total road network currently in Nigeria is 194,200 kilometres which consist of 129,577km local roads, 30,500km state roads and 34,123km federal roads (Vetiva, 2011).

The physical infrastructure gap in Nigeria particularly in transportation such as road, airports, rail and sea ports shows the utmost desire for sporadic development in the construction industry via PPP (Vetiva, 2011). Out of 193,200km total road network in Nigeria, only 30% is paved, compared to an average of 70% and 58% for frontier and developing markets respectively (Ahmed, 2011; Vetiva, 2011; Sanusi, 2012). The difference is catholic when compared to developed economies with an average paved road network of 100% (Vetiva, 2011). Therefore, development of road infrastructure has greater opportunity in Nigeria, showing about 70% total road network is unpaved and possibly un-motorable. Historically in Nigeria, development of road has been government's obligation. But with the advent of PPP, road infrastructure can be improved through private sector participation with supposedly end-user stakeholder's inclusion.

1.3 Research Questions

Managing end-users are difficult because they are drawn from different backgrounds organisations with dissimilar values, own goals and expectations among others (Pemsel, et al., 2010). A review of the existing body of knowledge on PPP road projects reveals that effective end-users' management is lacking. Social barriers, conceptual and institutional authority have hindered level of interaction with end-users. However, the management remains a task that has to be considered if PPP road projects are to be successful in Nigeria. Recently, end user stakeholders' dispute with Special Purpose Vehicles (SPVs), and the number of litigations as a results of the implementation of PPP road projects in Nigeria (see figure 1.2) clearly suggest the need to develop a framework for effective management of end user stakeholders' diverse interests.

Figure1.2: The Lekki toll gate protest

Source: Bella Naija (2011)

To succeed in the process of improving the quality of the outcome on end-users stakeholders management, the actual needs of the end-users have to be understood (Pemsel et al., 2010). A need is difficult and unconscious to express, while requirements are declarations related to existing condition (Ericsson, 2007). Based on this premise, the study seeks to answer the following research questions.

a) What is the genesis of Public Private Partnership (PPP) in Nigeria and who are the end-users stakeholders of PPP project?
b) What are the challenges facing end-users stakeholders of PPP toll road project in Nigeria?
c) What are the benefits and challenges facing PPP road projects in Nigeria from the end users stakeholders' perspectives?
d) What are the requirements needed to satisfy end-user stakeholders of PPP toll road project in Nigeria?
e) How to develop a framework for managing end-user stakeholders in PPP arrangement in Nigeria

1.4 Aim and Objectives

The overall aim of this research is to develop a framework that will encapsulate the strategic approach for successful management of the diverse interests of end user stakeholders of the PPP road projects in Nigeria. In order to achieve the above aim, the following objectives have been identified for the study:

1. To examine the evolution of PPP arrangement and identify various end-user stakeholders' perspectives.
2. To explore the potential challenges facing PPP arrangement in Nigeria.
3. To evaluate the end-user stakeholders needs along the project route
4. To investigate the challenges facing end-users stakeholders of PPP road project in Nigeria and identify factors for better end-users stakeholders' management.
5. To develop and validate a framework for managing end-users stakeholders PPP arrangement in Nigeria.

1.5 Unit of Study

One of the most significant requirements of a research thesis is the unit of study (Trochim et al., 2015). In order to avoid any misperception of confusions of results, a unit of study must be clearly stated in research. The unit of study are mostly based on feasible conclusions. As put by Grünbaum (2007, p.82), "the key issue in selecting and making decisions about appropriate unit of study is to decide what you want to talk about at the end of the study". Therefore, the unit of study for this thesis is individual who are the end-user stakeholders, including road users such as private and public drivers, government officials, private workers, passengers, residents within projects' host communities, among others directly involved with the project were considered in this study.

1.6 Scope and Limitation

The scope of a research refers to the extent of area the research is going to cover. It is very important to clearly state the scope of a study so as to enable users of the study know how widely generalizable the study is. This study had researched challenges facing the management of end users stakeholders in PPP projects in Nigeria. Nigeria development on infrastructure has predominantly been through traditional form of the contract awarded by local, state and federal governments through budgetary allocations (AfDB, 2010). It was concluded that both non-convetional and traditional procurements approaches are presently embraced for Nigeria transport infrastructure projects delivery (Babatunde et al., 2010). For instance, Babatunde et al. (2010) established that 19.24% of infrastructure projects are carried out through design and build method, 32.69% are through PPPs options and approximately half (48.08%) are carried out using traditional procurement approach. In Nigerria, infrastructure projects like roads, airport, rails among others has been a major concern for end-user stakeholders in the city. This happened as a result of increasing interest on good roads over the years, thus led to an inevitable increase in stakeholder's demand for suitable infrastructure facility (Babatunde et al., 2017). This problem can only be addressed through PPP by providing a finest functional method in achieving enabling, conducive and efficient road network in an economically driven envinronment. In acknowledging the boundless investment needed for the provision of infrastructure, Nigerian government has decided by putting in place an enabling environment to drive private sector involvement in providing basic infrastructure (Babatunde et al., 2016). Nigerian government established the Infrastructure Concession Regulatory Commission (ICRC) law in 2005 in order to woo private sector in financing infrastructure projects (Ahmed, 2011; World Bank, 2011). This law, created an enabling environment of operation in terms of legal and institutional framework for PPPs (Ahmed, 2011) in Nigeria.

The two PPP toll road projects that were considered for this study is Lekki-Epe toll road and Apakun Muritala Muhammed toll roads respectively. The toll roads are constructed within the last 10 years. The toll roads are constructed by private investors before handing it over to both State and Federal governments because of end-user stakeholders' agitation. The toll road projects are used by both private and commercial users which is not a barrier for adoption as sample. The toll roads are situated in Lekki and Ikeja axis of Lagos State

within the borders of Nigeria. All end users that are considered are all toll-paying users. These include commercial buses, commercial cyclist, commercial taxis, commercial Lorries, trucks or trailer, private bikes, private cars, private buses, office workers and pedestrians among others. Only frequent users, averaging a use frequency of once a week are also considered as part of the sampling population. Users such as drivers/riders and/or passengers of the vehicles are all inclusive. One of the significant limitations of this study is that PPP is considered from the end-user stakeholder's perspectives while the success factors of PPP are not considered within the scope of the project. In addition, another limitation of this work is that respondents from Apakun Muritala Muhammed toll road are very few because of their lackadaisical approach in filling the questionnaires. The adoption of the two toll roads formed the bases of method and applicability used in this study.

1.7 Research Methodology

The methodology of a research is probably the most important element of the research. It refers to how a research is conducted and includes the philosophical (including ontological, epistemological, axiological and rhetorical) underpinnings of the study, research strategies, research approaches, choices, time horizons, techniques and procedures, among others. Virtually all the challenges of a set of research questions can be answered using the right methodology. In this section, proposed philosophical and methodological approaches to the study are presented. Issues regarding research philosophy, approaches, units of analysis as well as data collection and analytical procedures are justified and briefly explained in this section.

The philosophical assumption of this research is realist ontology, since it is clearly believed that there are certain challenges affecting the end-users' management irrespective of any person's differing thoughts (Duberley et al., 2012; Saunders et al., 2012). Both subjective and objective epistemologies are applied since this work involves the interactions between human beings through interviews (subjective) and independent observation through the use of questionnaires (Mukherji and Albon, 2009; Saunders and Paul, 2013). The use of realist ontology, subjective and objective epistemology with

inductive and deductive research approaches respectively indicates the adoption of the pragmatism paradigm (Saunders et al., 2012; Coghlan et al., 2014).

According to Saunders *et al*. (2012), approaches to a research could be inductive or deductive, depending on the mode of enquiry. An abductive approach is established to look into the flaws associated with deductive and inductive approaches. A study is deductive if it seeks to test a theory or a set of verifiable hypothesis; otherwise, it is inductive if its aim is to develop a framework from its data. An inductive research would therefore begin with observation without placing any theory or hypothesis at its beginning while a deductive research begins with either existing theory or a number of hypothesis and propositions identified from existing studies (Clark and Creswell, 2014). It is however noteworthy to mention that neither of the two reasoning approach is better than the other, the purpose of the study as well as availability of extant literatures or theory usually determine the approach that was used (Saunders *et al*., 2012). Deduction and induction are connected research approaches (Matthew et al., 2014). It is usually beneficial to combine deduction and induction (Saunders et al., 2012) together in the same research realm.

According to Saunders *et al.* (2012), the strategies of research include survey, action research, experiment, case study, archival research, grounded theory, ethnography among others. According to Saunders and Paul (2013), it is very common to need more than one strategy in any research design or under any philosophical stance and in this case, this study engaged mixed methods strategy, which combines both qualitative and quantitative methods in a multiple study. Factors that contributed to the experience of PPP road projects end users in Nigeria (a social occurrence) were critically identified and examined using case studies of two PPP toll roads projects respectively. Multiple case studies are used in this study, which is better than other categories of case studies according to Yin (2013), in order to improve generalisation or reliability of the study. Multiple case studies will help to identify common features between the cases (Saunders et al., 2012); in this case, the common factors that contributed to the experience of end users of the two toll road were fully discussed using both qualitative and quantitative methods of analysis.

The unstructured interview method was used to achieve the case study research strategy (qualitative data) while questionnaires were also used to execute the survey strategy (quantitative study) hence this study engaged the mixed method research choice.

According to Saunders et al. (2012, p. 152), "mixed method research uses both quantitative and qualitative data collection techniques and analysis procedures either at the same time (parallel) or one after the other (sequential) but does not combine them." In order to improve the credibility and reliability of findings in this study, qualitative data from unstructured interviews and literature review, were used to inform the development of quantitative data collection method (questionnaires); this is known as facilitation (Saunders et al. 2012). The targeted respondents for the interviews and questionnaires were basically PPP road users and staffs of the special purpose vehicle for each PPP project (the company that constructed the road) in Lagos Nigeria. The unstructured interviews were aimed to established as many as possible factors that affected the experience of PPP road users in Lagos Nigeria since unstructured interviews do not limit respondents' response (Latham and Finnegan, 1993). The questionnaires were used to facilitate and improve generalizability/reliability of the collected data (Mathers et al., 1998). Purposive, snowballing and random sampling methods were used to identify the targeted respondents.

1.8 Contribution to Knowledge

This study has contributed to the existing body of knowledge in two ways, i.e., Academic knowledge and industrial practices. This study would make a significant impact in academic contribution by providing new directions into understanding of end users stakeholders' interests in PPP road projects in Nigeria and other developing countries. Pointedly, the study would also, contribute significantly to the study of PPP, by using the validated framework that had been developed in order to streamline the essential features for managing the diverse interests of end users stakeholders of PPP road projects in Nigeria. The study had identified the impediments and challenges; facing PPP infrastructure projects in Nigeria using mixed method approach in solving the problems that may be encountered before the inception of the project. Although previous studies had investigated the impediments and challenges in PPPs through an empirical method in Nigeria, hence outcomes of this study are treasured to both private (foreign) and local investors by lengthening the awareness of end-users stakeholders by adopting PPPs in developing countries especially in Nigeria. Also, the outcomes of the study would enable

the end-users stakeholders in PPPs recognising the significant impediments in executing PPP projects in Nigeria. This study has not only contributed to knowledge with the respect to the development of end-user stakeholders groups in PPP, but also contributed to the broader body of knowledge of route guidelines to be followed when implementing PPP in the entire construction industry

In contributing to industrial practices, the framework developed as a result of this study would be useful to government in real life practices by providing synergy between public and private sector with insights into understanding the diverse interests of end users stakeholders. The framework could be used to identify sources of conflicts of interests and disagreements in the delivery of PPP road projects in Nigeria. End-users stakeholders' management framework has not been established for PPP project infrastructure in Nigeria. Presently, there is no existence of such framework, and this improvement is expected to boost the implementation and success of any PPP arrangement in Nigeria, introducing new prospects and offering assistance to the construction industry.

The framework could provide practicable steps that can be followed by stakeholders group in Nigeria involving PPP projects so as to develop their level of competence in terms of maturity and thus assure implementation of long-term success of PPP road projects in Nigeria. A strong relationship and co-operation will be developed between the end users, stakeholders and the government on PPP projects. This will significantly reduce end users' opposition, litigations and the cost expended on dispute resolution.

1.9 Thesis Layout

The thesis is divided into eight chapters. A schematic guide to the thesis is illustrated in Figure 1.3. A brief summary of each chapter is presented below:

Chapter 1 – INTRODUCTION: This chapter explains the background to the research, the research questions, the aims and objectives of the research. The work undertaken to achieve the objectives, main achievements and the guide to the research are also presented.

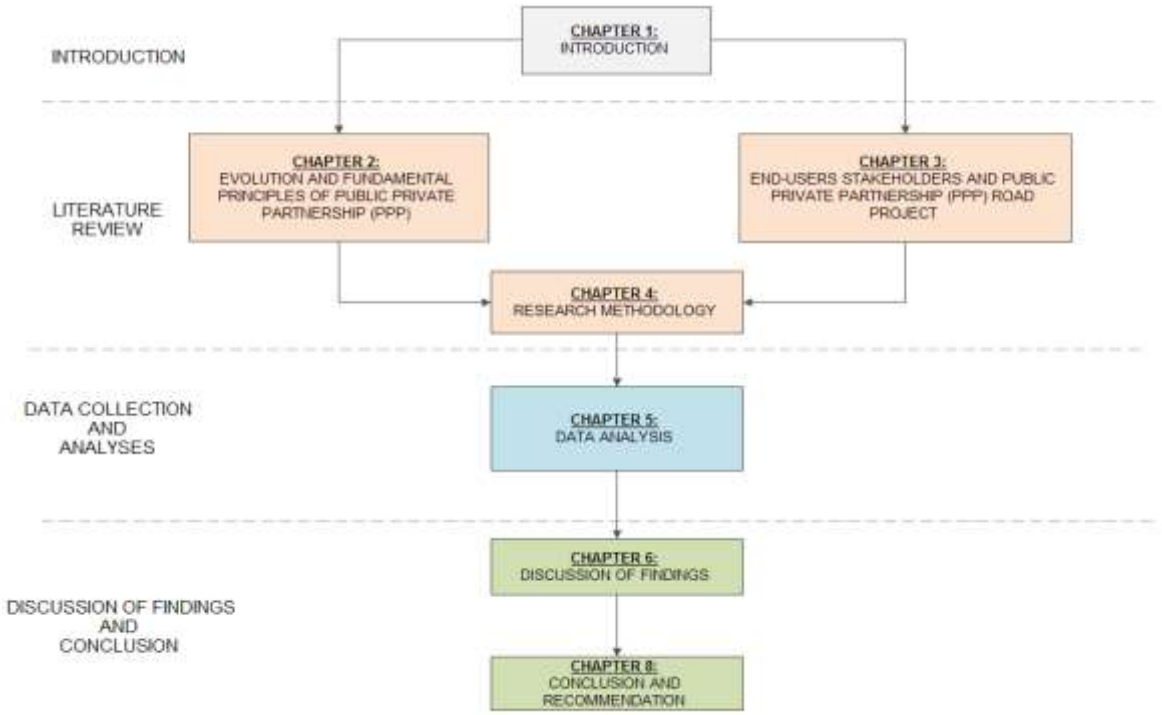

Figure1.3: The thesis structure

Chapter 2 – Evolution and Fundamental Principles Of Public Private Partnership (PPP): This chapter reviews the literature related to the history and fundamental principles of pubic private partnership, which can be traced back to the ancient Roman and Greek era, particularly in the maritime business, where finance was often structured under an agreement of loan repayments through the sale of goods carried by the ship, while sharing risks equally. The private investors agree to share risks associated with the project equally which is currently one of the most prolific applications of project finance in recent times known as Public Private Partnerships (PPP) Scheme which is a way of growing or improving infrastructural facilities through legal contractual agreement between public and private entities.

Chapter 3 – End-Users Stakeholder and Public Private Partnership (Ppp) Road Project: This chapter reviews the literature related to the end-users stakeholders' marginalization in PPP road project arrangement worldwide and in Nigeria in particular. This chapter also refines the focus of significant factors that can be used as a framework before and during the implementation of toll road project under PPP plan.

Chapter 4 - Research Methodology: This chapter presents the research methodology. It discusses the methodological considerations for this study and presents the adopted research methods.

Chapter 5 –Data Analysis: This chapter presents the results of case studies carried out to obtain the perspective of the respondents of the PPP toll road projects. Results obtained from interviews are discussed together and interpreted and also descriptive analysis of the survey carried out to obtain perspective of the end-users stakeholders' level. Factor analysis was used to identify underlying factors from the questionnaire data. This assisted in reducing the dimension of the variables and identified factors groupings.

Chapter 6– Discussion and Findings: This chapter presents a discussion of the major findings obtained from the study. The chapter contains the results from the qualitative and quantitative data analyses.

Chapter 7 – Conclusion and Recommendations: The concluding chapter summarises the studies and discusses the contribution to knowledge. The chapter also presents the academic and industrial implications of the study. It also addresses the limitations of the study and proposes future research opportunities.

CHAPTER 2 EVOLUTION AND FUNDAMENTAL PRINCIPLES OF PUBLIC PRIVATE PARTNERSHIP (PPP)

2.1 Introduction

This chapter examined issues relating to Public Private Partnership (PPP) scheme and Private Finance Initiative (PFI). In particular, the chapter emphasises the historical background of PPP and how PPP operates in Nigeria. This is to set a solid foundation for the study. In addition, the chapter explore the fundamental principles of PPP and the development of PPP in Nigeria. Four case studies of PPP projects delivered in Nigeria are presented and discussed. At the end of the chapter, current challenges confronting the development of PPP in Nigeria are also discussed.

2.2 PublicPrivatePartnership (PPP) Scheme/Private Finance Initiatives (PFI)

Any functional society and economy must have necessary facilities, which could be referred to as public infrastructures. According to Torrisi (2009), infrastructure has been described fundamental network of facilities, services and installations required for the proper functioning of any society such as community, city, and nation. Public infrastructure can be classified into two broad categories, namely:

- Social infrastructure which is important to the society such as hospitals, post office, prisons, libraries, schools among others;
- And economic infrastructure which is important for daily use such as utility networks and transportation facilities (road, rail, electricity, sewage and sewage among others)

Constructing and maintaining public infrastructures has remained a timeless challenge for developed and emerging economies (Zawawi et al., 2014). This is due to the huge capital investments require for such developmental projects. In this respect, many societies have

adopted various means of financing public infrastructures (Ibrahim et al., 2009). One of the oldest methods of financing such project is through Project Finance, which is not a new practice across the globe (Crozet, 2014). It can be traced back to the ancient Roman and Greek era, particularly in the maritime business, where finance was often structured under an agreement of loan repayments through the sale of goods carried by the ship, while sharing risks equally (Brewer et al., 2013). According to Yescombe (2011. p1) Project finance can be defined as:

"*A method of raising long term debt financing for major Projects through financial engineering, based on lending against the cash flow generated by projects alone, it depends on detailed evaluation of project construction, operation and revenue risks, and their allocation between investors, lenders and other parties through contractual and other arrangements*."

In project finance, the underlying principles are non-recourse financial arrangement and equitable risk sharing. Non-recourse financing involves the financing of a project in which the investor's risks is limited to the amount of capital contributed into the project. In this regard, any loss arising from the project will not lead to recourse to the investor's individual balance sheet. The private investors therefore agree to share risks associated with the project equally. Currently, one of the most prolific applications of project finance in recent times is the PPP (Gangwar and Raghuram, 2015) arrangement scheme.

The origin of PPP came from United States of America in the 1950s, where educational programmes are being funded by both public and private sectors. This approach was later widely used in the 1960s as public – private joint schemes for municipal rebirth. It was used as a private sector initiative with government agencies combating various diseases such as malaria, polio and Aids among others, to generally support economic development (Meunier and Quinet, 2010). Although the approaches adopted in the various health schemes can be considered as policy based or programme-based PPPs (Gangwar and Raghuram, 2015). PPP has emerged as a more robust procurement applications used to delivery diverse public amenities. PPP can be described in a number of ways, as no universal meaning could be agreed upon due to its complex underpinning concepts (Crozet, 2014). Academic and industry practitioners have tried to define PPP, using various comparisons with other partnership arrangements (Mouraviev and Kakabadse,

2012). Rosenau (2009) described PPP as a means of bringing government to the market, in a way to solve the revenue hardship, reflecting concerns about debt growth and empowering the consumers. From the perspective of Delmon (2011), PPP is defined as a way of growing or improving infrastructural facilities through legal contractual agreement between public and private entities.

In a recent study by Yescombe (2011), PPP has been described with some significant elements as follows:

- a long term contract (a `PPP Contract') between a public sector and a private sector party;
- for the design, construction, financing, and operation of public infrastructure(the` facility') by the private sector party;
- with payments over the life of the PPP Contract to the private sector party for the use of the facility, made either by the public- sector party or by the general public as users of the facility; and
- With the facility remaining in public- sector ownership, or reverting to public-sector ownership at the end of the PPP Contract.

Similarly, Zou et al., (2014) defines PPP as a long term contractual agreement between the public and private sector entities where public sector infrastructural facilities is constructed and managed by the private sector entity. Another definition of PPP was offered by Ministry of Finance in India, where PPP is considered as a payment of user charges on infrastructural facilities available for practice, where private sector on one side will enter into covenant or franchise with government legislative unit on the other side, based on the contractual terms (Sharma et al., 2014). However, the concept of PPP has gone beyond financing projects alone (Meunier and Quinet, 2010). PPP has also been connected with management and planning of human personnel (Ke et al., 2010) where municipal development snags is occurring.

2.2.1 PFI/PPP as an Alternative Public Procurement Route

One of the major breakthroughs in PPP emerged in 1992, with the introduction of the UK version of PPP known as Private Finance Initiatives (PFI) (Oyedele, 2012). The PFI, which is also referred to as PPP in many other climes, began due to the advent of budgetary constraints in procuring essential infrastructures for public use, as well as perceived inefficiencies in the public sector (Brewer et al., 2013). Towards the end of the last two decades, financing public infrastructure had become a major challenge for many governments across all levels (Ibrahim et al., 2009). Many Governments were facing rising public sector debt amidst increasing pressures on existing critical infrastructures (Zawawi et al., 2014). This led to serious infrastructural gaps in many developed and emerging economies. The PFI therefore came on board, as a new policy approach to infrastructure procurement, where private sector will be responsible for constructing and operating a project, while also accepting project risks, with the public sector obtaining value for money (Akintoye *et al.,* 2011). The idea of PFI by the UK Government was to enhance the provision of numerous public amenities by engaging private management expertise (Loosemore and Cheung, 2015) and to increase the brilliant performance of services through adequate efficiency and competence

From public sectors' perspectives, the private sector was better positioned to deliver value for money to tax payers in terms of project quality, innovation and timely delivery (Zawawi et al., 2014). Since its emergence, the PFI framework has been used to deliver public utilities within the UK (Brewer et al., 2013) such as street cleaning, waste management, mail services, construction activities, health care services, housing and prisons services among others. According to Oyedele (2012), over 900 infrastructures with an estimated value of over £70 billion have been delivered in the UK through the PFI/PPP approach. One of the example of project delivered using the PFI scheme is the third Dartford Crossing of River Thames linking two stretches of the M25 motorway surrounding London, which was done in form of BOT arrangement where the private entity is expected to operate the tolling for 20 years in order to recuperate their investment and later return the facility back to the UK government. Currently, PFI have been institutionalised in the UK, with both the Labour and Conservation Governments since 1992 adopting it as a policy thrust for encouraging private sector investments in public infrastructures (HM Treasury, 2000; Ping and Bing, 2014). PPP has been seen as the

effectiveness of business projects joined together with shared values (Meunier and Quinet, 2010) to propagate the solidarity and culture of citizen in mobilizing the participant to perform creditably well in developing a nation (Sedjari, 2004). A typical case is the Tunisian and Moroccan experience in developing their nations through partnerships. This has gainfully increased both nations economic buoyancy, in terms of technology and infrastructural amenities. The Tunisian economy has enjoyed robust relationship with the private sector, thereby facilitating the procurement of roads, rails, hospitals and bridges while also producing chemicals, textiles, shoe making, olive oil, and preservation of vegetables, also fruits and cereals among others. Morocco took another dimension using the partnerships such as PPP to implement the grey areas of employment initiatives, poverty alleviation, educational literacy, and social infrastructure for both women and children (Sedjari, 2004), income generating activities, sporting and cultural activities among others which has strengthened their economy.

One of the major motivations of the public sector in PFI/PPP arrangements is off-balance sheet financing. By transferring the responsibility to design, build, finance and operate (DBFO) a project under a long-term contract, the public sector is able to avoid budgetary constraints, which could have prevented such projects (Gangwar and Raghuram, 2015). In doing so, government transfers risks associated with financing large infrastructures from the public sector to the private sector. PPP arrangements often involve many participants who are major stakeholders working for the success of the project (Ke et al., 2010). Apart from the public sector (also referred to as the grantor), other parties involved in PPP contracts are financiers (syndicated banks), and a newly incorporated Special Purpose Vehicle (SPV), also called project company, construction and operation contractors (see figure 2.1). Some other parties may include multilateral institution, debt and equity financiers (Loosemore and Cheung, 2015) lifecycle operator, insurers among others, all which represent the experts in the sector (see figure 2.1)

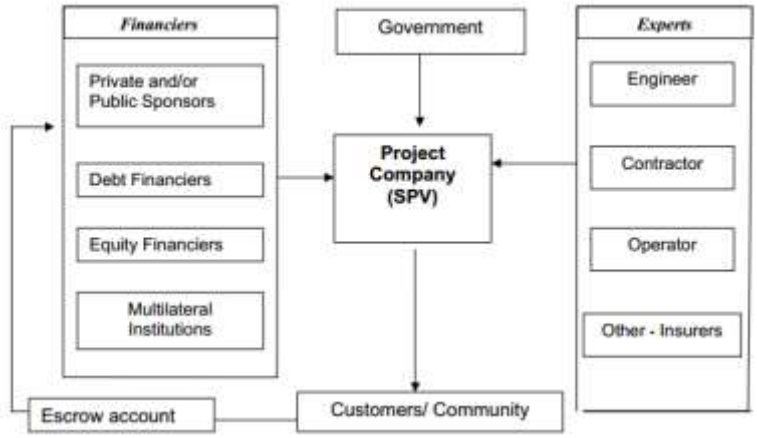

Figure 2.1: Parties Involved in PFI/PPP contracts

Source: Guidebook on PPP in infrastructure, UNESCAP (2011)

Although, the public sector is the grantor and facilitator of PFI/PPP projects, the private sector parties, particularly the project SPV and the financier (banks) play central role in a PPP (see figure 2.1). The SPV is a Limited Liability Company formed by private investors, who come together in order to raise a non-recourse loan from lenders, in order to construct and operate a PFI project under a long term concession that may range from 15-30years (Brewer et al., 2013). Being non-recourse loan, lenders have no access to the personal balance sheet of investors in the event of project failure. PFI projects are highly leveraged in capital structure, as such, the ratio of capital contributed by lenders to that of sponsors is often in the range of 80% - 20% debt equity (Visconti, 2013). Many PFI projects having capital structure of 90%-10% Debt equity ratio has also being financed, since its inception. There are various forms (models) of PFI/PPP procurements. These comprised Build Operate Transfer (BOT), which is the most popular globally. Other models in PPP include Design, Build Finance and Operate (DBFO), Design, Build Operate (DBO), Design, Bid Build (DBB), Build Own Operate (BOO) among others. Many more procurement methods have gained considerable attention from private corporations, government, and academics are as follows (Ng et al., 2013): DCMF (Design, Construct, Maintain, and Finance), LROT (Lease, Renovate, Operate, and Transfer), BOOR (Build, Own, Operate, and Remove), BLTM (Build, Lease, Transfer, and Maintain), and BLT (Build, Lease, and Transfer). DBFOOMT (Design, Build, Finance, Own, Operate, Maintain, Transfer), DBFOT (Design, Build, Finance, Operate, Transfer). (Zou et al., 2014; Mouraviev and Kakabadse, 2012; Miller, 2013) Models that are commonly used in PFI/PPP road construction were futher discussed fully.

2.2.2 Structures and Models in PFI/PPP Procurement

Design–bid–build (DBB): This method has been widely used by federal government of America and some states as a means of delivering infrastructural development facilities. It is a form of separation of functional activities where by the construction and design functions are completely separated. Hitherto the operation and maintenance of facilities are also separated. The client instructed the construction firm to erect the facilities while the architect or engineer to takes up the design roles. Finance, operation and maintenance of facilities throughout the project (Miller, 2013) become the responsibilities of the client. In this case the client might be federal or state governments.

Design–build (DB): The procurement method in which both construction and design of a project is carried out by one private sector contractor (Loosemore and Cheung, 2015). In this regard, the client (government) retains the responsibility to make provision for all the remaining segmented components of the project such as functional design criteria, initial planning, financing, operation and maintenance of facilities. This is a well-recognized method of procurement in both local and states in USA as a substitute to DBB. The use of DB as a procurement way has gainfully developed the practices and access to information (Miller, 2013) through the Design Build of America (DBIA) as an organisation.

Design –build –operate (DBO): This comes as an improvement on DB approach, where the private contractor brings the critical knowledge of operation and maintenance to into the design and construction stage in order to meet the client specification (Miller, 2013). The client makes provision for the design criteria and initial planning. This method allows the producer to get enough funds from the client in order to perform the necessary duties given to the client. Financial backing can be in the form of collection of user's charges or direct payment of cash.

Built–own–operate (BOO): This procurement model enables the private sector to take responsibility for designing, build and operation of the project (Ng et al., 2013). This model also allows the private sector to own the project but with a buyout clause from the government or renegotiation of agreement can spring up (Zou et al., 2014). A typical example happens in South Australia where water treatment plant was designed, built, financed and operated by the private entity serving the public drinkable water for consumption.

Design–build–finance–operate (DBFO), built-operate–transfer (BOT): These two PFI/PPP models are similar in nature with respect to the fact that the private investor is charged with responsibility to design, build, finance and operate a facility for a precise concession period (Ng et al., 2013). This period is usually in the range of 15-30yrs, after which the ownership goes back to the granting authority after the concessional period (Kang *et al*., 2011). Public authority retain the ownership of the facilities throughout the contract and the private investor operate the facility by charging the users in order to recover the proceeds invested on the contract instead of physical ownership of the facility (Yescombe, 2011). The first BOT took place in the UK in 1660 where private investors were granted the concession to construct a turnpike road during the early financial recessions and expansion of industries. In (1782), Perier Brothers were granted concession to pump and supply water to the Paris city of France (Auriol and Picard, 2013). Miller (2013) acknowledge that the differences between DBO and DBFO is that the financial capability of the public client determines the operation of DBO project delivery while the financial capability of the project or strength of the private contractor is needed to be able to operate a DBFO.

Operation and maintenance (OandM): This model follows a pattern in which the private sector is responsible for the operation and maintenance of already existing infrastructural facilities. The public sector (grantor) releases the procurement of operation and maintenance to the client (Miller; 2013). The partial involvement of private sector in managing and operating such project facility is however limited to a definite time i.e. 5-10yrs (Zou et al., 2014). This type of model have been practised in the mining operations in Africa and Latin America, in agro-business in Cameroon, Senegal and Cote d'Ivoire, and also electricity as well as water projects in Guinea-Bissau (Rondinelli, 2013). Usually in this situation, the performance of private entity depends on the public acceptability in payments (Delmon, 2011) e.g. service collection and billing improvement, marketing and management of services.

2.2.3 Other Existing Procurement Routes

The provisions of facilities through private financing have different methodologies (Yescombe, 2011). PPP mobilizes private entity more efficiently in terms of successful

delivery of service arrangements (see figure 2.2) while other procurement alternatives have also been previously examined (Delmon, 2011). Other existing procurement methods that are used in project delivery are fully examined (see figure 2.2).

2.2.3.1 Concessions

Concessions are grants of rights, properties or land by the public sector, community or local authority to a private individual who will manage such facility for a specified period of time (Sharma et al., 2014). Concessions represent the first attempt at private sector participants in public projects (Ping and Bing et al., 2014). Under typical concessions, the primary approach is a `user pays' method where the private sector has the right to operate facilities by charging the public considerable fees as a way recovering the revenue incurred (Yescombe, 2011). Concessions could be traced to the 18th and 19th when the British clusters of local magnates formed Turnpike Trusts and private investors became involved in funding infrastructural repairs of bridges and roads (Hensher and Li, 2013) and investments are recovered through toll/tariff charging. Similarly France and the USA engaged a private sector to construct canals and bridges in the 17th and 19th centuries respectively. One infrastructure area in which concessions have been proliferated is the road concessions. This was considered in this study as a preferred procurement method that was used by both federal and state governments of Nigeria.

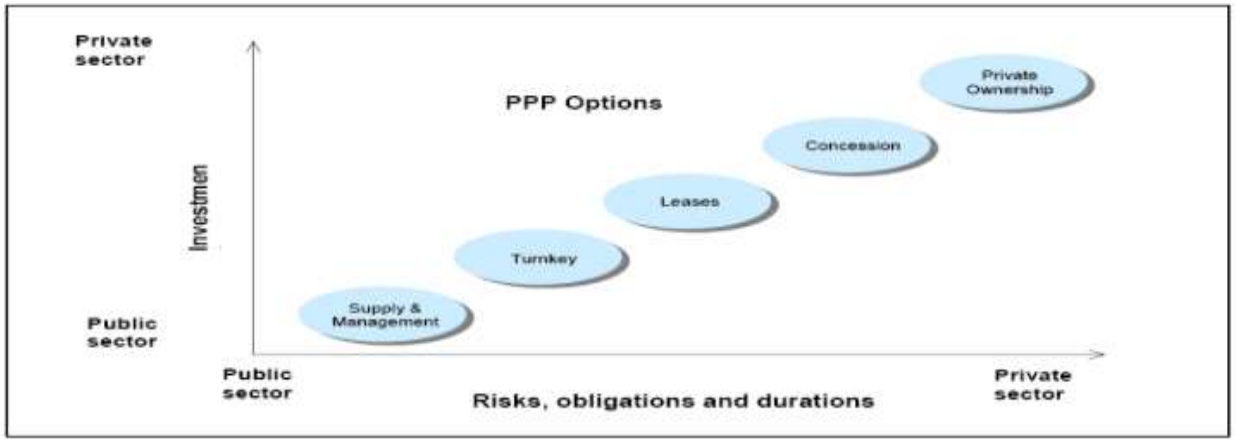

Figure 2.2: Basic features of PPP Models

Source: Guidebook on PPP in infrastructure, UNESCAP (2011)

In road concessions, agreement can be made between the government and the concessionaire in terms of payments, where level of commercial risk can be reduced to favour the private sector to make the venture commercially worthwhile (see figure 2.2). Time frame for the concession is often in the range of 5 to 50 years (Rossi and Civitillo, 2014). Another way of identifying a concessional model is through acceptance of responsibility on maintenance and upgrading of an asset between a specific periods of time (Moravia and Kakabadse, 2012) by private investor after funding the public infrastructure to recover the money spent through pay users' fees by the consumers' throughout the operational period such as what occurred with the chosen PPP arrangement in this study.

2.2.3.2 Affermage/Lease

Affermage and franchise are interwoven and has almost the same meaning in French word which came as an improvement of concession where the private entity (Concessionaire) has the opportunity to make use of the prevailing facility (Yescombe;2011). The responsibility of the leaseholder (Concessionaire) is to operate and maintain the prevailing infrastructural facility which does not require large investment from the private entity. But where this arrangement is shared with another model the private entity will significantly increase is investment so as elongate the period of the contract. There is a practical difference between a Lease and Affermage. A lease model identifies a specific sum of money to be paid to the contracting authority, while the concessionaire will be saddled with the revenue collected from the facilities users. However in case of Affermage the revenue generated from users will be shared between the contracting authority and the Concessionaire (Rossi and Civitillo, 2014).The payment that is made in a lump sum in return for the rights on the facility to the public authority (Yescombe, 2011) makes this model a non-PPP approach because it does not involves upgrading and provision of infrastructure. There are different forms of PPP models that are categorised and described with there mode of operations that are always used to carry out infrastructural developments in most of the developed and developing countries (see table 2.1). This shows the level of participation in terms of risk, ownership, operation and maintenance between public and private sector.

The development of infrastructure through PPP in Nigeria has been acknowledged as a catalyst for economic development (Babatunde et al., 2017). Maintaining the existing infrastructure is becoming alarming due to the increase in population and economic growth of the nation. PPP came as leverage in funding public services in a climate of scarce resources (Forrer et al., 2010) in overtaking the burden of Nigeria government by providing the necessary finance.

Table 2.1: Different forms of PPP Models

Broad Category	**Main Variants**	**Operation and Maintenance**	**Ownership of Assets**	**Investment**	**Assumption of Risk**	**Duration (years) of Contract**
Service Contract and Management Contract	Outsourcing	Private	Public	Public	Public	1-3
	Management Support	Public and private	Public	Public	Public	1--2
	Operation and Management	Private	Public	Public	Public	3--5
Turnkey Contracts		Private	Public	Public	Public	3-5
Delegated Management Contract	Lease Contract	Private	Public	Public	Semi-private	8--20
	Affermage	Private	Public	Public	Semi-private	5-20
Concession	Franchise	Private/ public	Public	Public/ Private	Public and private	20--30
	BDO	Private	Public	Public	Private	20--30
	BOT, BOO	Private	Public/ Private	Private	Private	20--30
Private Ownership	PFI, Divestiture	Private	Private	Private	Private	Indefinite

Source: Guidebook on PPP in infrastructure, UNESCAP (2011)

2.3 Development of Public Private Partnership in Nigeria

From history, Nigeria has not had consistent investment in infrastructural facilities (Larkin, 2008). According to the World Bank report, the Nigeria government only spends the equivalent of 1% of her gross domestic product (GDP) on critical infrastructures. Additionally, the slowdown in global economic outlook has also resulted in terrific pressures leading to rising costs of developing projects (Kennedy et al., 2015; Babatunde et al., 2012) which cannot be exclusively met by only the government without the involvement of private investors. The Infrastructure Concession Regulatory Commission (ICRC) got a mandate from the Federal government to publicise Federal government projects eligible for PPP contracts. Relevants Ministries, Departments and Agencies (MDA) were asked to manned the projects (see table 2.2)

*Table 2.2: PPP Projects Pipeline (*some of the ppp pipeline project by the federal government)

S/N	Project and Description	Phase and Proposed PPP Model	MDA
1	**2nd Niger Bridge** A Greenfield bridge and associated approach access road over the River Niger connecting Asaba and Onitsha	- ImplementationPhase - Build Operate Transfer basis	Federal Ministry of Works
2	**Rehabilitation and Upgrade of the Murtala Mohammed International Airport (MMIA) Road to Apakun Junction, Lagos** Expansion of MMIA access road from a 4-lane dual carriageway to an 8-lane road with vehicular and pedestrian bridges at appropriate locations	-Procurement Phase: Selection of preferred bidder concluded -Build Operate Transfer basis	Federal Ministry of Works
3	**Rehabilitation and Upgrade of Lagos –Iseyin – Kishi – Kaiama Road**. The Lagos – Iseyin – Kishi – Kaiama Road, Lot IA – will provide direct connectivity between Lagos and the North-West Zone. The road passes through Kaiama in Kwara state to link	-Development Phase: Outline Business Case Preparation. -Build Operate Transfer basis	Federal Ministry of Works

S/N	Project and Description	Phase and Proposed PPP Model	MDA
	a new alignment (Lot IB) at Bahana, in Niger State. Road is approximately 450 km long.		
4	**<u>Rehabilitation and Upgrade of Kaiama-Bahana-Kaoje-GwanbeFokku-Sokoto Road</u>** The Kaiama-Bahana-Kaoje-GwanbeFokku-Sokoto Road (New Alignment) completes the connection between Lagos and the North West Geo Political Zone. The road passes through Kaiama in Kwara state to link Bahana a border town in Niger State and Kaoje in Kebbi State and terminates in Sokoto town. This new alignment road (Lot 1b) is approximately 650km long.	-Development Phase: Outline Business Case Preparation -Build Operate Transfer Basis	
5	**<u>River Benue Bridge @ Ibi, Taraba state</u>** This proposed bridge across River Benue at Ibi town is about 2.4km long and lies on the Jos – Shendam - Ibi – Wukari – Katsina Ala road. This bridge would replace current movement of goods and services across the river by motorized ferry.	-Development Phase: Outline Business Case preparation -Build Operate Transfer basis	Federal Ministry of Works
6	**<u>Dualization of Enugu (9th Mile) – -Development Phase: Fed. Min. of Works Obollo Afor –Otukpo-Makurdi Road:</u>** The 9thMile-Otukpa-Otukpo Road is a 119km long single carriageway road from the Enugu – Onitsha Dual Carriageway at 9th Mile Junction connecting Obollo Afor to Otukpa Junction in Benue State and intersecting the Lokoja – Otukpo Road.	-Development Phase: Outline Business Case preparation -Build Operate Transfer basis	Federal Ministry of Works

S/N	Project and Description	Phase and Proposed PPP Model	MDA
7	**Rehabilitation and Dualization of Ilorin-Jebba-Mokwa-Tegina-BirninGwari Road** Rehabilitation and dualization of the existing 233km single carriageway trunk road (National Route No. R20) from Ilorin in Kwara State to BirninGwari, Kaduna state.	-Procurement Phase: Outline Business Case preparation -Build Operate Transfer Basis	Fed. Min. of Works
8	**Upgrade, Operations and Maintenance of Federal Government of Nigeria (FGN) Agro-Value Chain Infrastructure Centres** Scope consists of 18 Nos. AgroIndustrial Estates, 8 Nos. AgroProcessing centers and 9 Nos. Farmers Markets. Aim is to provide for greater private sector participation in the Agricultural Transformation Agenda. The facilities are located across the 6 geo-political zones of the country.	-Procurement Phase: Engagement of Transaction Advisers in progress	Fed. Min. of Agriculture
9	**Development of Mechanic Villages** The project is aimed at developing the automotive value chain via the provision of 6 pilot modern mechanic villages in the nation's 6 geopolitical zones.	-Development Phase: Outline Business Case preparation	Fed. Min of Trade and Investment (National Automotive Council)
10	**Upgrade and Modernization of Kiri Kiri Lighter Terminals 1 and 2, in Lagos** Scope is significant modernization, operations and maintenance of the existing Kiri Kiri lighter terminals 1 and 2 on PPP basis	-Procurement Phase: Engagement of Transaction Adviser completed. PPP procurement activities in progress. -Rehabilitate Operate Transfer basis	Fed. Min. of Transport and the Nigeria Ports Authority

S/N	Project and Description	Phase and Proposed PPP Model	MDA
11	**Operations and Maintenance of Onitsha Inland Water Port in Anambra State** Engagement of a competent private sector partner to operate and maintain the recently completed and commissioned inland port	-Procurement Phase: Engagement of Transaction Adviser completed and PPP procurement activities in progress. -Operate Maintain Transfer basis	Fed. Min. of Transport/National Inland Water Authority
12	**Operations and Maintenance of Western and Eastern NRC Narrow Gauge Railway** Engagement of a competent private sector partner to supply additional coaches and wagons and operate/ maintain post rehabilitation the Eastern and Western network of the Nigerian Railway Cooperation.	-Procurement Phase: -Supply Operate and Maintain	Fed. Min. of Transport/Nigerian Railway Cooperation
13	**Abuja District Infrastructure Project Mabushi, Districts** Financing, construction, operation and maintenance of urban engineering infrastructure starting with Mabushi, district of Abuja	-Procurement Phase: Procurement of concessionaire awaiting approval.	Federal Capital Development Authority(FCDA) /Federal Capital Territory Administration (FCTA)
14	**Abuja Mass Transit Railway Lot 2 (Red Line)** Development and operation of lot 2 of the Abuja Mass Transit Railway system. The red line is circa 54 km long and commences from Garki to the interchange centre at the Eagle Square in the Central Business District, and spans to Nyanya – Karu axis of the FCT. It also goes to sector centre D through Hilton Hotel, Gwarimpa FHA Estate and the light railway Lot 1 (Blue line currently under construction).	-Development Phase: - Build Operate Transfer	FCDA/FCTA

S/N	Project and Description	Phase and Proposed PPP Model	MDA
15	**<u>FCT Roads Network Development and Modernization covering the following roads</u>** 1. Umaru Musa Yar adua Airport Expressway completion 2. Outer Northern Expressway (ONEX) completion 3. FCT Road 105 4. FCT Road 106	- Development Phase Viability and Options review	FCDA/FCTA
16	**<u>Concession of Strategic Grain Reserve Silo facilities:</u>** Scope consists of 33 Nos. silos complexes located across the country	-Development Phase: Procurement of Transaction Adviser in progress.	Fed. Ministry of Agriculture and Rural Development
17	**<u>Development of 45MW of Hydropower from 10 different small and medium dams</u>** : Lot 1 (10MW Oyan Dam Ogun State, 6MW Ikere Gorge Dam Oyo State and 450KW Owena Dam Ondo State) Lot 2 (3MW Bakolori Dam Zamfara State, 500KW Kampe Dam Kogi State and 1MW Doma Dam Nasarawa State) Lot 3 (4MW Jibia Dam Katsina State, 300KW Zobe Dam Katsina state, 10MW Tiga Dam Kano state and 10MW Challawa Dam Kano State)	- Development Phase Preparation of outline business case in progress	Fed. Ministry of Power
18	**<u>Concession of the Multi-purpose components of the Gurara 1 dam, Kaduna State:</u>** This consists of the concession for the hydropower, irrigation, water supply and other components of the dam	- Development Phase Preparation of outline business case for the irrigation and hydropower components in	Fed. Ministry of Water Resources

S/N	Project and Description	Phase and Proposed PPP Model	MDA
		progress.	
19	**<u>Reconstruction, Rehabilitation and Expansion Of Lagos- Ibadan Dual Carriageway</u>** Expansion and Redevelopment of the 127km Lagos to Ibadan Expressway:	-Procurement Phase -Reconstruction, Rehabilitation and Expansion is in progress via Traditional Procurement. Additional private sector finance required for completion and to operations and maintain.	Federal Ministry of Works

Source: Infrastructure Concession Regulatory Commission (2015)

This has led the Nigerian Federal and State governments developing majority of infrastructural projects in progress through PPPs (Alitheia, 2010). The acceptance of PPP involves severe procedure compared (Ahadzi and Bowles, 2004) to the old-style of budgetary procurement. Public-private partnership became a matter for national discourse amidst serious constraints to budgetary allocations facing the Nigeria government at both Federal and State levels (Babatunde *et al.*, 2016). The PPP approach was introduced as a third alternative to the absolute transfer of public infrastructures top private investors through privatizations and the traditional method (Jones, 2010; Sarvari et al., 2014). With more quests for precise analysis and innovative solutions in meeting the basic infrastructural requirements, the Nigeria governments began a gradual shift away from the age long traditional policy of public sector procurements (Sarvari et al., 2014). Currently, the provision of infrastructural facilities has gained momentum with more involvement of the private sector in delivering large-scale and complex infrastructure projects across Nigeria. These physical infrastructural facilities were tipped as important enablers

(Oluwasanmi and Ogidi, 2014) galvanising social service delivery, industrial growth and facilitating the movement of persons and goods.

As earlier argued, the investment in social and physical infrastructure has been considered as a stimulating factor for economic growth (Ng et al., 2013). This is evidenced by results from many developed economies where investments in infrastructure have catalysed the financing and development of public infrastructural facilities and services (Li and Zou, 2011). Despite the progress being made in Nigeria, with a current population of over 182.2 million and an annual growth rate of -2.06% (National Planning Commission, 2016), Nigeria still have daunting challenges with the delivery of essential public infrastructural facilities and basic amenities. This suggests the huge task ahead of Nigeria in terms of infrastructural challenges (Ibrahim *et al.,* 2009). Although various efforts have been made in terms of enormous infrastructure investment by previous governments, socio-economic developments have continued to be elusive. Recently, suggested reports has shown that the country needs between $12 and $15 billion yearly for a protracted period of six years (Babatunde *et al.,* 2016) in order to fulfil the standard infrastructural requirements.

Against all the various infrastructural challenges faced by Nigeria, the popularity of PPP is however on the rise, especially in the area of roads construction, markets, estates, car parks including managing and operation of old infrastructural facilities such as conference centres among others (Abdul-Aziz and Jahn, 2011; Awodele et al., 2012). In the last ten years, over N15trillion has been invested by the Federal, State, and Local administration through PPPs in over 25 major infrastructural projects. This is in spite of the targeted N32 trillion investments in infrastructural facilities towards achieving the country's vision 2020 (Alitheia, 2010). In furtherance to this developmental target, the federal government of Nigeria has put in place a number of enabling laws (Ng et al., 2013) to regularize all contractual arrangements of PPP. This has been facilitating the effective implementation of projects and private sector collaboration. As highlighted by Babatunde *et al.* (2016), there is currently a growing support and political will from Nigerian government at all levels towards developing the PPP as a mainstream procurement policy. Infrastructure Concession Regulatory Commission (ICRC, 2013) in Nigeria derived four major motives that inspire Governments to accept PPP for infrastructural growth and service circulation; (a) To increase the organisational policies and plans that will lay concrete foundation for valuation and transparency. (b) To improve accountability and reform all sectors through

reallocation of incentives and roles. (c) To entice more skilled force with economic talent and orientation on effective performance (d) to utilize available resources optimally. The initial design of PPP guidelines, legislation, policies and other means of institutional frameworks is determined by the success or failure of PPPs (ICRC, 2012), Figure 2.3 shows the Nigeria federal institutional framework..

This institutional framework distributes particular roles and responsibility to several bodies and how the bodies will be operating amicably with the federal government without any encumbrances. Under these framework settings (Akintoye et al., 2011), the potential benefits of PPP road project now unlock opportunities to maximize economic returns.

Perhaps development of this framework gave Lagos state an opportunity to exemplify an effective application of PPP in Nigeria. The Lagos State government kick started the introduction of PPP in Nigeria with the passage into Law of the Lagos State Roads, Bridges, and Highway Infrastructure Development Board (2004). This infrastructure law, which has been supplemented with other procurement laws and compiled into what is now regarded as the Lagos State Public Procurement Law 2011, provides a framework for private sector involvement in the delivery of public infrastructures. Currently, the Lagos State has implemented PPP procurement routes in various sectors such as power generation, maintenance of highway, waste disposal management amongst others. The successful implementation of these laws in the state has led to increased cooperation between private investors and the state government (Global legal group, 2007) and has yielded numerous dividends in the grey areas such as social, political and economic returns.

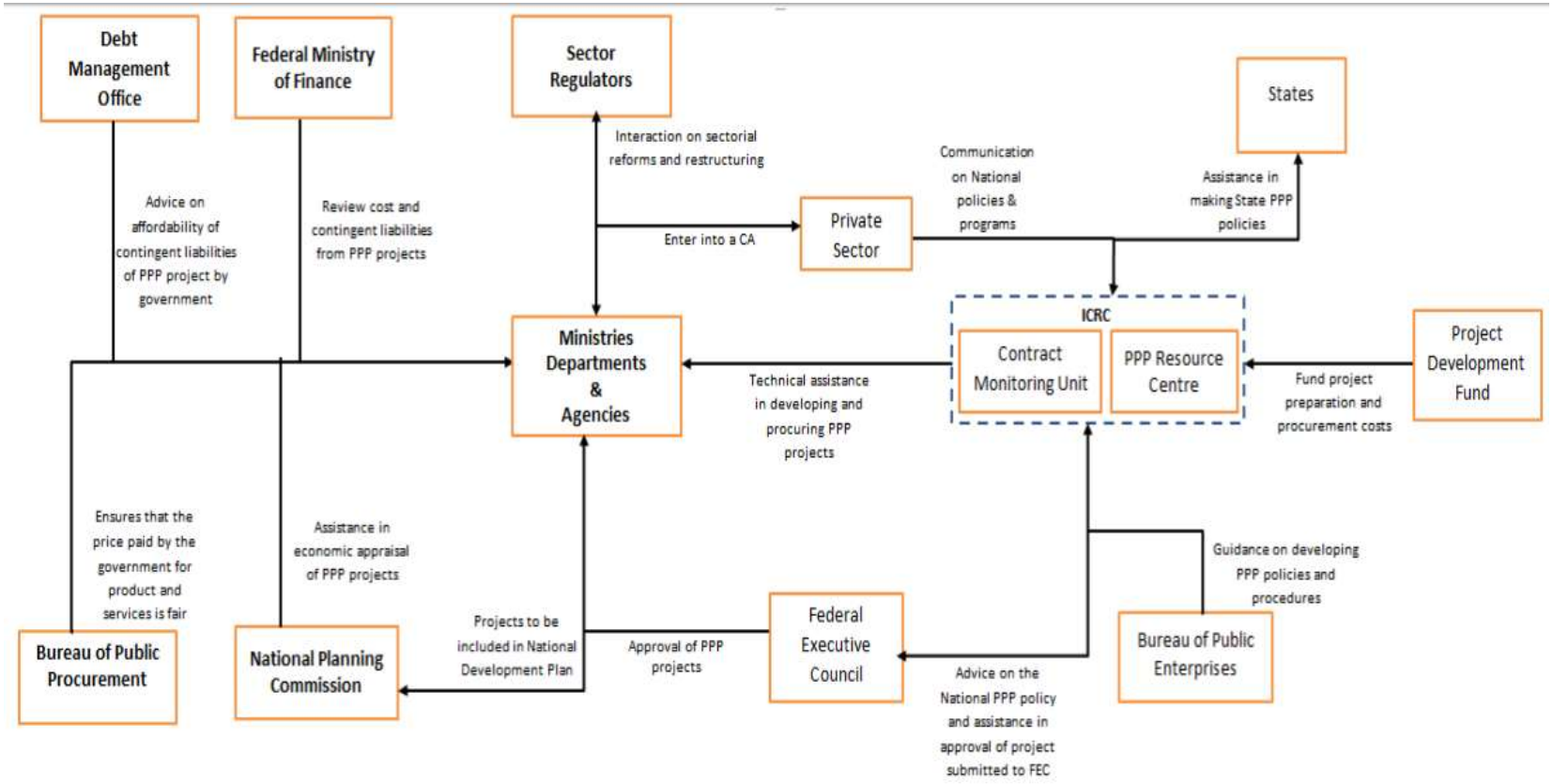

Figure2.3: Nigeria's PPPs Institutional Framework

Source: Infrastructure Concession Regulatory Commission (2012)

2.3.1 The Economy and Politics of Nigeria

In examining the development of Public Private Partnerships in Nigeria, it is very important to explore contextual environment of social economic climate of the country, as it affects the application of PPP. The economic and political development in Nigeria has been previously reviewed (Gidado, 1996; Babatunde *et al.* (2016). Nigeria's economy is strongly influenced by the oil sector, which accounts for about 40% of gross domestic product (GDP) and 85percent of the country's foreign exchange incomes. Nigeria with large natural and human resources has the capability to create a wealthy economy that will reduce poverty, and make provision for its population in terms of good health, education, and infrastructure facilities. Irrespective of the country's oil wealth, the ravaging poverty prevalent in the country made her to be listed amongst the 20 poorest nations in the world (World Bank, 2002). Nevertheless, successive government in Nigeria since the advent of democracy in 1999 have made various efforts towards expanding the infrastructure base of the nation. A number of vibrant policies have been adopted towards generating broad-based economic growth, which will combat widespread of poverty (Ibem et al., 2013). The national policy on procurement legislated PPP manuals as follows:

(a) The public procurement Act 2007
(b) Infrastructure Concession Regulation Commission (ICRS) Act of 2005
(c) The state laws as described in each states PPP policies
(d) Regulations issued by ICRC governing the PPP process

One of the policies is the Public Enterprises (Privatization and Commercialization) Act 1999, which saw the legalisation of privatization and commercialization of public utilities by Federal government of Nigeria. The main objective of the act was to allow the private sector to take up investments in infrastructures, while encouraging them to make profits. The act also saw the creation of National Council of Privatisation (NCP) and Bureau of Public Enterprise (BPE), both serving as the supervisory agency implementing the government's privatisation programme. Under the 1999 act, the application of concessions was adopted as means of commercialising already existing state-owned enterprises (Babatunde et al., 2016). Despite the huge amount of investments made through privatisations, the performances of many former public enterprises now under private control were woeful in meeting the objectives for which they were established (Yakubu

and Anigbogu, 2016). This failure had led to several policy summersaults and ultimately the increasing trends towards the adoption of Public Private Partnership approach (Oyedele, 2015). The opposition of the public who are end-users stakeholders has become basis of concern (Lv and El-Gohary, 2016) for PPP projects in Nigeria and the world at large. With the advent of PPP, several projects were delivered and commissioned in Lagos state and other parts of Nigeria.

2.4 PPP Projects Delivered in Nigeria

Some of the important PPP projects in Nigeria include the Lekki Toll Road Concession project which is one the most successful PPP project awarded by Lagos State government, Concession of Lagos-Ibadan Expressway awarded by Federal government of Nigeria (Babatunde et al., 2016), Concession of Muritala Muhammed Airport Terminal 2 awarded by Federal government, Concession of Lagos Rail Mass Transit awarded by Lagos Metropolitan Area Transport Authority (LAMATA) under Lagos State government, and Turnkey project by River State Government in building a specialist hospital for the public among host of others.

Some of the projects executed by Lagos State government through PPP design approaches (Bamidele et al., 2016) were discussed below. These are obtainable in Tables 2.2, 2.3 and 2.4 respectively. These are projects in operation; Projects in operation/construction; and Projects under achievement/pipeline. From left to right of Tables 2.2, 2.3 and 2.4 are the corresponding Terminology of Global Journal of Management and Business Research Volume XV Issue II Version I (2015). ©2015 Global Journals Inc.(US) State of Infrastructure Procurement in Lagos State, Nigeria: The PPP strategic places of the projects; Involved parties and partnership; Project potency (shows the aptitude of each of the projects in satisfying the demand for the procurement); the update of the work in progress; and the approach that was used in carrying out the PPP (see table 2.3). These are the projects delivered successfully and there serviceability.

Table 2.3: PPP Projects in Operation in Lagos Nigeria

	Project	**Parties**	**Project Description/Potency**	**Progress Update**	**PPP Approach**
a.	Lekki-Ikoyi Link Bridge	Lagos State Government (LASG) and Lagos Tolling Company (LTC)	The project is an operation and maintenance concession of Electronic Tolling System of the 1.358km Lekki-Ikoyi Bridge. *Potency:* The project has decongested traffic in Eti-Osa, Lekki, Ikoyi and its environs.	The Bridge was opened to traffic on 1st June, 2013.	Concession
b.	Island Power (9.7MW)	Lagos State Government (LASG) and Island Power Limited (A part of Negris Group)	The project is the development of a 9.7MW Independent Power Plant between the LASG and Negris Group. *Potency*: The project has been providing uninterrupted power supply to some public facilities on Lagos Island.	Concession Effective Date: November 2009 Concession Expiry Date: October 2019.	Build, Own, Operate (BOO)
c.	Alausa Power (10.4MW)	Lagos State Government (LASG) and Alausa Power Limited	Alausa Power delivers 91,104,000 Kilowatt Hours (kWh) of power to LASG. *Potency:* The project has been providing uninterrupted power supply to Lagos State Secretariat, Ikeja and other public facilities.	Commercial Operations Date: 13th June 2012 Expiry Date: 12 June, 2022.	Design, Develop, Finance, Construct, Operate, Maintain and Transfer (DDFCOMT)
d.	Mainland Power (10.4MW)	Lagos State Government (LASG) and Mainland Power Limited (Set up by CET Power Limited)	The project is a partnership between LASG and Mainland Power to construct an 8.8 MW Independent Power Plant (IPP). *Potency:* The project has been providing regular power supply to LASG public infrastructure in the Old Secretariat/Ikeja GRA	Commercial Operations Date: 29th October 2014 Expiry Date: 28th October 2024.	Build, Own, Operate, Transfer (BOOT)

	Project	Parties	Project Description/Potency	Progress Update	PPP Approach
			as well as public street lights on the Mainland Lagos.		
e.	CG-EKO Ventures LLP	Lagos State Government (LASG) and Coscharis Motors Ltd	This project is the renovation and upgrade of the Eko Engineering facility. *Potency:* The project is a top-quality automobile centre, integrated sales/after-sales maintenance workshop, a driving school and an auto-mechanical skills-acquisition centre.	Project was officially inaugurated on July 17th 2012.	Joint Venture
f.	Akute Power Project (12.15MW)	Akute Power Limited (SPV) set up by Oando Gas and Power Plc) and Lagos State Government (LASG) represented by Lagos Water Corporation (LWC)	LWC in collaboration with Akute Power Limited constructed a captive Independent Power Plant (IPP) to generate 12.15 MW. *Potency:* The project supplies uninterrupted electricity to power the LWC facilities at Iju and Adiyan Water works.	Commercial Operations Date: February, 2010 Expiry Date: January, 2020.	Build, Own, Transfer (BOT)
g.	Lagos State Bus Rapid Transit scheme (BRT)	Lagos State Government and Lag Bus	The Lagos State Bus Rapid Transit is the first of its kind in sub-Sahara African conveying over 200,000 passengers daily. *Potency:* The introduction of the scheme has reduced travel time from 78 to 50 mins (Mile 12 to Tafawa Balewa Square).	Commercial Operations Started March, 17, 2008.	Public/Private Sector Operated
h.	Health Initiatives	1, Bola Tinubu (BT) Health and	Private Sector Operated Service at Lagos State University Teaching		Concession

	Project	Parties	Project Description/Potency	Progress Update	PPP Approach
	Private Sector Operated Health Facilities	Diagnostic Centre 2, Bola Tinubu (BT) Pediatrics Complex 3, Mortuary (LASUTH) 4, Mortuary	Hospital Services in Isolo and Lagos Island are in advanced stages of procurement and delivery. *Potency:* The facilities have been providing qualitative health care service to the masses.		
i.	Gbagada Renal and Cardiac Centre	1, Renescorp LLP (SPV) Lagos State Government (LASG)	The project is in operations and maintenance concession with Messrs RENESCORP LLP. The 39-bed centre is host to a 64 slice CT scanner, 24 dialysis stations (with beds) and other advanced medical equipment. It provides in and out healthcare services to the public. *Potency:* The project has brought in place first World expertise, and provides first-class end-stage renal disease and cardiology healthcare to patients.	-	Concession

Source: State of Infrastructure Procurement in Lagos State (Bamidele et al., 2016)

Projects in operation/construction are the ones which are currently functioning but are still subject of one form of arrangement or the other in construction work.

Table 2.4: Projects in Operation/Construction in Lagos Nigeria

	PROJECT	PARTIES	POTENCY - PROJECT DESCRIPTION	PROJECT UPDATE	PPP APPROACH
a.	Lagos Infrastructure Project (LIP) Concession	Lekki Concession Company Ltd (LCC) and Lagos State Government (LASG) Office of PublicPrivate Partnerships (PPP)	The Lagos Infrastructure Project (LIP) is a 30-year concession to design, construct, finance and operate the Concession Area *Potency*: Eliminate the severe traffic gridlock along the Lekki-Epe expressway corridor.	Concession Effective Date: November, 2008 Concession Expiry Date: November, 2038	Concession
b.	Mortuary Services – Isolo General Hospital	Farewell Funeral Homes Limited (FFHL) Lagos State Government (LASG) represented by the Lagos State Ministry of Health	The Isolo mortuary project is a 10-year Design, Build, Operate and Transfer (DBOT) PPP concession *Potency*: The infrastructure has improved mortuary services of Isolo General Hospital, Lagos.	Commercial Operations Date: 16th November, 2011Concession Expiry Date 17th October, 2021	Design, Build, Operate and Transfer (DBOT)
c.	Co-operative Home Ownership Incentive Scheme (CHOIS)	Lagos State Government (LASG) represented by the Lagos State Ministry of Housing and First World Community Limited	The project is a joint venture agreement with the private sector for the delivery of 10,000 affordable housing units within 3 senatorial districts of the state (namely Ikorodu, Badagry and Lekki- Epe axis).	Concession Agreement executed in July 2008 Construction works in progress at two locations- Abijo GRA and Agbowa to deliver about 500 units	Joint Venture/ Limited Partnership

Source: State of Infrastructure Procurement in Lagos State (Bamidele et al., 2016)

The remaining projects are under achievement due to the procurement arrangement which have been completed but awaiting the operation of the accomplished projects constructions.

Table 2.5: Projects under Achievement/Pipeline in Lagos Nigeria

	PROJECT	**PARTIES**	**POTENCY - PROJECT DESCRIPTION**	**PROJECT UPDATE**	**PPP APPROACH**
a.	Lagos Urban Rail Mass Transit (LRMT) Lagos Metropolitan Area Transport Authority (LAMATA)	Lagos State Government and CCECC company from China .	Lagos Urban Rail Mass Transit (LRMT) is a network of intra-city rail lines. For this project, The Red line is a 32 kilometre rail line from Alagbado to Marina with a spur to the domestic and international wings of the airport in Ikeja, whilst the Blue Line is a 27 kilometre rail line from Okokomaiko to Marina, Lagos	The designs concept of both rail networks has been completed. Blue Line- Design and Build Phase: (7.2KM from National Theatre to Mile 2) contract awarded to CCECC and construction fast progressing.	Concession
b.	Odomola Water Plant Lagos Water Corportation (LWC)	Lagos State Government (LASG)	The project is The development of a 210 MGD water Supply Scheme in Multi-phases starting with a 25 MGD conventional Water Treatment Plant (WTP).	Four eligible parties qualified out of eleven interested parties. Procurement modalities has been concluded	Concession

Source: State of Infrastructure Procurement in Lagos State (Bamidele et al., 2016)

Having discussed about the project success and the initiatives of government, there is need to discuss fully some selected PPP projects on the concession of infrastructural facilities designed to satisfy the public sector (Opawole and Jagboro, 2017). With the arrangement of controversies challenging concenssioning exercise in Nigeria (Oyewobi et al., 2012) it is obvious from findings that the selected PPP projects to be discuuss have related peculiarities in satisfying end-user stakeholder's needs (Babatunde et al., 2016). Due to the rapid urbanization, it is strongly acknowledged that these projects have boosted the notable economic strength and successes in Nigeria (Opawole and Jagboro, 2016), giving the country the opportunity to stimulate its economic growth in general. Nigeria as one nof the fastest growing economies in the sub-Saharan Africa with the rising population of 150 Million, infrastructure challenges needed more attention (Sanusi, 2012). Recently, infrastructure projects in Nigeria are gaining recognition through PPPs which indicates sound improvement of infrastructure development between 1990 and 2009 (Vetiva, 2011). About 24 PPP projects commenced within the last five years in the transport sector between 2005 and 2009 in which the four chosen projects were inclusive. Another 66 PPP projects were undertaken between 2013 and 2014 (ICRC, 2014) which is similar to what is going on in Europe. This is confirmed by Adetola et al. (2011) that PPPs has gained popularity in delivering infrastructure projects such as roads and airports among others across the world.

2.4.1 Concession of Muritala Muhammed Airport Terminal 2

The administration of President Olusegun Obasanjo in April 2007 granted approval for the refurbishment, expansion, upgrading, and maintenance of the Muritala Muhammed Airport Terminal 2 (MMA2) see figure 2.4. The airport is one of the main airports in Nigeria located in Ikeja area of Lagos state South-Western Nigeria and serves the city of Lagos (Airport-technology.com, 2007). The federal government through the public sector was unable to provide amenities in the airport, just as there are clear cases of mismanagement of funds by past managements of Federal Aviation Authority of Nigeria (FAAN), which has led to decay of infrastructure at the nation's gateway (Ibem, 2010). The government considered the means of supplementing the facility as a liability, and decided to involve private investors that could bear the burden under a PPP arrangement.

The facility was officially handed over to an aviation firm by the federal government through FAAN in a closed bided concession, to give the country a befitting terminal that would lead to continuous enabling of passengers in order to embrace government's desire to improve infrastructure under the PPP arrangement (Okoye and Akenbor; 2011). This project was executed by Bi-Courtney Aviation Services on a build, operates, and transfer (BOT) basis. The project was to cover the domestic terminal and ancillary facilities on a land area of 20,000m2. Bi-Courtney organised a N20bn ($150m) syndicated medium-term refunding facility with Access Bank, First City Monument Bank, Guaranty Trust Bank, Oceanic Bank and Zenith Bank as partners in financing the PPP aviation project (Olusola et al., 2012). The project, which was located at the commercial nerve centre of Nigeria in Lagos, was billed to serve about 30,000 flight passengers per day.

The MMA2 has completely affected the mind of the end-user stakeholders in the aviation sector with the enthusiasm, perseverance and overwhelmed energy in terms of challenges (Nwangwu, 2016). The terminal has enlightened the thoughts of end-user stakeholders of the typically poor environments of any airport terminals in Nigeria with obsolete facilities and hidden treasures.

Figure 2.4: Muritala Muhammed Airport 2

Source: The Daily Trust (2017)

The sustainability of MMA2 has given an insight to the successful practicability that can be involved in the delivery of infrastructure through PPP model (Falayi and Ajala, 2014). Although, the concessioning process encountered an intensed disputes between FAAN representing the federal government, and the private investor Bi-Courtney Aviation Service (Babatunde et al., 2016) Eventually, MM2 project later became the trailblazer for other PPP projects in Nigeria, many challenges were recorded including, epileptic power supply, non-availability of quality spare parts in the local marketplace, resulting to protracted delivery of high quality imported materials among others. This project was one of the pioneer PPP project in Nigeria with so many litigation problems (Oluwasanmi and Ogidi; 2014), and was immediately imitated by Lagos state government in constructing road with the advent of PPP for Lekki-Epe toll Road. The success of the project informed all other private investors on the virtues of partnering with governments in bridging the gaps on infrastructure facilities.

2.4.2 Lekki Toll Road Project

Jamison et al., (2007) described Lagos State as the 17th largest urban centre in the world. The population of Lagos State is about 9,013,534 people according to the National Census Board of Nigeria (2006). This forecast infers that Lagos State is a mega city and therefore requires world standard infrastructure facilities. The state is host of major Nigerian sea ports on the Atlantic Ocean to Algiers on the Mediterranean Sea (Nwoye and Iyiola; 2016), the Trans-African Highway connects the Atlantic city of Lagos to the Indian Ocean city of Mombasa in East Africa through Cameroon and Central Africa.

The Lekki-Epe express road was primarily constructed by past administration of Jakande, Mudashiru and Akhigbe respectively in the year 1979-1987 (Okoye and Akenbor; 2011) then the entire Lekki metropolis was unlocked for speedy development. Invariably the area started experiencing rapid and unmatched urban growth with new estates developments and new communities springing up and creating larger population for low and middle-income citizens. The previous administration realized the pressing need to address the fast growing problem of road congestion along this axis and an idea was conceived to expand the existing road into a three- lane dual carriage expressway (Dominic et al., 2015) and also construct the alternative coastal road that will pass through

Ahmadu Bello way along the shores of Atlantic Ocean towards Ibeju-Lekki local Government area (see figure 2.5)

Figure 2.5: Lekki-Epe Toll Road

Source: Nigeria Village square Magazine (2010)

In 2008, Lagos State Government announced a contract in form of 30-year Public Private Partnership (PPP) concession between the State Government and Lekki Concession Company (LCC). The major drive behind this concession is to deliver sustainable answers to the challenges facing heavy traffic bottleneck along the Lekki/Epe expressway road (Daily Independent, 2013, Lekki-Epe Corridor, 2009). This project was designed to guarantee the development and upgrading of 49.4km Lekki-Epe Expressway including the construction of 20km of coastal roads on the Peninsula. In addition Built- Operate-Transfer (BOT) PPP arrangement was engaged for the Lekki toll road as a type of concession to deliver the infrastructure. Lekki concession company (LCC) was a member of group of companies that partnered and corroborate with a special purpose vehicle (SPV), in order to provide vital road infrastructure and service along the Lekki-Epe expressway. This SPV consist of legal and regulatory advisers, design and IT installation firm, Toll Service Company and construction companies. The SPV was set up by a local finance company, Asset Resource Manager (ARM), with Macquarie Bank of Australia and Old Mutual of South Africa as shareholders (Nwangwu, 2016). Furthermore, some of the LCC local investors (Lekki-Epe Corridor, 2009) include African Infrastructure Investment Managers, Stanbic IBTC, and First Bank of Nigeria.

The highway road project links the Peninsula with the rest of Lagos, making it the fastest developing area of the state. The project, whose estimated cost was valued at N50Bn, was funded with equity funds provided by the African Infrastructure Investment Fund, while loans were provided by the Federal Government of Nigeria (FGN) including the Private Sector as well as Development Finance Institution DFI soft loans (Falayi and Ajala 2014). Government grants were also provided by the FGN for the Lekki road project. This toll road project adopted user-charge model, with the LCC bearing the demand risk (charges toll directly on road users). Though since the opening of the tolled road, stiff opposition and public scrutiny from local residents (Koornstra et al., 2002; Hensher and Li, 2013), human right activists and road users continued to surface which later led to litigation and protests. (see figure 2.6)

Figure 2.6: The Lekki toll gate protests

Source: Bella Naija (2011).

Although, Lagos State government truncated the concession agreement at a premature stage due to the agitation of end-users stakeholders on the outrageous toll charges. This agitation was due to the negligence and improper consultation of end-users at the beginning, during and after the PPP road project (Lekki-Epe Corridor, 2009). It was argued by the Lagos State government that LCC has the prerogative to increase the toll

tariff irrespective of end-users stakeholders concerns based on the incessant inflation rate in the country (Oluwasanmi and Ogidi; 2014). The devaluation of currency in the year 2008-2013 caused an abrupt rise in inflation which obviously affected the cost of the project (Ndiribe et al., 2010) and prompted concessionaire to raise the toll tariff abnormally. Poor infrastructure is one of the key limitations to economic growth through its devastating effect (Loto, 2013) on investment in-flows, productivity, cost of doing business, competitiveness and publics' assurance in the government and the economy.

The project faced a number of challenges during the construction and operation stages. Some of the difficulties encountered include but not limited to the following:

1. Land dispute between the village people along the project axis for "right-of-way" (ROW) on road expansion from two lanes to eight lanes,
2. Nervousness by stakeholders group frequently based on improper information/knowledge about the project,
3. Poor infrastructure and cost of doing business along the project routes.
4. Agitations by stakeholders due to introduction of unexpected tolling charges, among others issues.

However, it is common to adopt that by purpose of classification, PPP is affliated to parties of public and private sector (Cheung, 2009), this as shown by involving four (4) major parties that engages in PPP relationship. They are itemized as the private sector; public authority; project employees; and public (end-user stakeholders) of the amenity (Opawole and Jagboro, 2017). The last of the itemized major parties (end-user stakeholders) are the concerned group which this study had engaged for in-depth consideration. The federal government took a giant step by notifying the public in expanding and reconstructing of Apakun-Muritala Muhammed Airport toll road in order to address the contests experienced by the road user along the route, therefore, proposes to enter into commercial partnership with qualified concessionaire with a model of Design, Build, Operate and Transfer (DBOT) of the toll road with a PPP arrangement programme.

2.4.3 Apakun-Muritala Muhammed Airport Toll Road:

Airports are universal tourist autograph of any host nation (Narayanaswami, 2017) which expresses bulk of the diverse mindset of any government. The federal government of Nigeria recommends rehabilitation and expansion of Apakun-Muritala Muhammed airport road with the establishment of Infrastructure Concession Regulatory Commission (ICRC) Act 2005 using PPP (http://www.icrc.gov.ng/). The road is a dual carriageway of 2.8km connecting Apakun to the Muritala Muhammed Airport (MMA) see figure 2.7

Figure 2.7: Muritala Muhammed Toll road

The road is expected to be upgraded from four (4) to eight (8) lane carriageway capacity with 2.75m shoulders on both sides together with the construction of pedestrian bridges and vehicular at suitable locations (Adeniyi et al., 2011). The design, built, operates and transfer (DBOT) was chosen as the preferred PPP model. The expansion, design, rehabilitation and construction of the road is going through reconstruction in line with the Federal Ministry of Works (FMW) specification which was agreed as international standard in order to provide good riding skids for the road users along the project route (see figure 2.8)

Figure 2.8: Muritala Muhammed airport Road's Reconstruction

Source: This Day Newspaper (2017).

The FMW has embarked on the toll project in order to increase the role of private sector in the maintenance, management and upgrading the infrastructure (Babatunde et al., 2016). Roughton Ltd United Kingdom was awarded the contract at sum of N38Bn with the vision of financing the project and generates their revenue through the toll collection directly from the end-user within a period of 30 years. The road has an alternative route which most of the road user prefer because of toll charges. The route is always busy because it serves various communities which necessitated public inclusion through a PPP project arrangement (Narayanaswami, 2017). This boosted commercial activities and diversifivation of investment to remote areas that are presently not accessible. The road has been upgraded and tolled expecting to harness some positive impact such as increase linkage to national road network, reduce wear and tear of vehicles, (Opawole and Jagboro, 2017) reduce travel time, improved road safety and maintenance.

Usually, justice, honesty and confidence are fundamental underpinnings of effective PPPs. Partnering should be reciprocally observed as representing an opportunity instead of risk and loss of control (Loto et al., 2012). In this circumstance, while identifying the vast difficulties in operating across sectors with effective realities and different approach, the attention should be on recognizing common objectives, negotiating expectations and describing responsibilities for other road users across the state of the nation (Babatunde et al., 2016). It is important to satisfy the public by upgrading the road passage that connects two States together in order to provide good road infrastructure to support the road user

and sustained economic growth that will stimulate livelihoods for communities living along the project route. Lagos-Ibadan expressway is exceptionally amongst equal which needed to benefit from PPP arrangement program.

2.4.4 Lagos-Ibadan Expressway

In 2009, the Federal Government of Nigeria awarded a concession for the upgrade and expansion of 105KM Lagos-Ibadan Expressway to an indigenous company, Bi-Courtney Highway Services Limited. The expressway criss-cross three south- western states of Lagos, Ogun and Oyo states, which starts at Ojota interchange through shagamu junction, Ogere and ends at Ojoo in the city of Ibadan; a distance of 127.6km. It is also an arterial that links Lagos to other states of the federation (Nwoye and Iyiola, 2016), the project, which was to be delivered as a PPP toll road was valued at N89.53billion. Under the 25-years concession contract, Bi-Courtney was charged with the responsibility of building, operating, and transfer (BOT) of the road. In spite of the valuable potentials of the concession, given the economic significance of the road to Nigeria, the project suffered monumental setback, with the construction phase but has commenced operation (see figure 2.9)

Figure 2.9: Reconstruction of Lagos-Ibadan expressway

Source: Construction Review online (2016)

According to (Olusola *et al.,* 2012), one of the major reasons for the failure of the road project was because the regulatory and legal frameworks required to guide the PPP procurement were not meticulously followed to the latter. In a report by (Babatunde *et al.,* 2016), the Nigerian Infrastructure Concession Regulations Commission (ICRC) Act 2005 was said to lack the necessary powers needed to prevent the Concessionaire from bending the rules governing the PPP project (Ng et al., 2013). The Nigerian government was not spared in receiving blames for the project failure, as the International Centre for Investigative Reporting (ICIR, 2012) criticised her for failure to engage expertise/professionals services. The PPP project was as a result left in the hands of unskilled officials of the Federal Ministry of works to handle the terms of agreement for the project. Other challenges faced on the Lagos/Ibadan Express Road Concession include;

1. Insufficient knowledge of Public (Department, Agencies and Ministry regulating PPP)
2. Lack of competitiveness in bidding
3. Absence of evidence of finance before the contract documents was signed
4. Land dispute between the villagers along the project axis due to “right-of-way” (ROW) on road expansion from two lanes to eight lanes, among others.

Recently, the Federal Government of Nigeria begins an internal review of the Federal Highways Act with the opinion of recommending some changes that will guarantee successful privatization process. It was discovered during the review that infrastructure concession regulatory act (ICRC) lacked “saving provision” with regards to other existing legislation in relation to concession (Babatunde et al., 2016). There is no clear law for the commission in respect to the approval process for PPP projects and also the power to grant a concession which obviously contradict the provisional Act of the Federal Government of Nigeria on (ICRC) to rather specify the Act as monitoring and advisory responsibilities instead of regulatory Act (The Guardian, 2016). The Act does not make any alternative provision for resolution dispute, which is more effective platform for solving commercial disagreements in conflict from regular courts. The development of the road programme was initially scheduled to be completed in 2009 but encountered various challenges. The

project at the moment is undergoing extensive upgrading and reconstruction by the Federal Government of Nigeria.

2.5 CHALLENGES FACING THE DEVELOPMENT OF PPP IN NIGERIA

By principle, PPP projects are long-term undertakings that usually span between 25-30years or more (Oyedele, 2012). The long tenor of such type of projects, coupled with their complex contractual arrangements present end-user stakeholders with many inherent challenges and risk factors. However, these challenges are diverse across different nations depending on the level of their maturity in terms of PPP applications (Ng et al., 2013). In many emerging economies, especially Nigeria, the growth, and development of PPP had been faced with a number of inherent challenges and country-specific risk factors (Olusola et al., 2012). These challenges have militated against the successful implementation of many early PPP initiatives in Nigeria. According to Ibem (2010), unless Nigeria is able to summon these various country-specific challenges, meeting her World Bank infrastructure investment target of 7-9 percent of the GDP for developing economies may become unrealistic. A summary of challenges based on review of the existing literature are briefly discussed.

2.5.1 Transparency and Competitive Procurement Process

Until recently, PPP found it difficult to prosper because of non-availability of regulatory frameworks where no model or reference points can be sighted. This has created many challenges in PPP related projects in road, rail, and power sectors with no precise laws governing the transactions and choice of concessionaires that are willing to contribute in infrastructural development (Kennedy et al., 2015). Beyond the prevalence of traditional contracting methods such as the Design and Build (DB), most contracts have been handled under the influence of political patronage with lack of competitive tendering (Rana et al., 2013). In other instances, procurement contracts have been shrouded in secrecy in many early PPP deals prior to the emergence of regulatory laws such as Infrastructural

Concession Regulatory Commission (ICRC) Act 2005. Contract cancellation and counter-party risks with attendant lack of clear specification of outputs were also part of the major challenges that affected many early PPP projects in Nigeria (Loosemore and Cheung; 2015). However, with the ICRC Act 2005 among many other state PPP laws such as in Lagos state, government has been able to enforce compliance between the Private and Public sectors through monitoring with little or no effective controls. Delay in procurement causes setback for PPP arrangement in Nigeria. Currently, the federal governments and its organisations owe billions of nairas due to delay of projects either failure to comply with agreements or revocation of concession unlawfully. If the government had done the right thing properly, maybe the project would not have suffered delay (Oyedele, 2012). Federal government were looking for drawings, designs documents and so on after signing the contract over a year, which should have been procured.

2.5.2 Lengthy Procurement Timelines

Being at its infant stage and riddled with many complexities, the duration between financial close and construction completion of PPP projects in Nigeria is usually lengthy. According to (Babatunde *et al.* (2012.), the average completion time for PPP projects in Nigeria is between 6-8years. A number of reasons have been attributed to this lengthy procurement duration. As argued by (Kennedy et al., 2015), Nigeria is yet to streamline her procurement approach in line with current realities and demands of public private partnership arrangements. As such, it continues to rely on bureaucratic procedures and processes of contract approval, due diligence and project preparation (Rana et al., 2013). Many PPP projects had also been delayed due to changes in political leadership, with new governments having to renegotiate already finalised projects. This challenge has been critical to the poor participation of indigenous private lenders in Nigeria's PPPs (Nwangwu, 2016), as most lenders are unable to structure PPP loans due to uncertainty about project duration.

The government representative revealed that the design of the project takes another 180 days after procurement before it can be realesed to the concessionaire in order to proof financial capabilities of executing the project (Nwoye and Iyiola, 2016). In Nigeria, contract award is being used to settle the politician in order to achieve almost all its goals

to develop infrastructure, but it was lately concession was adopted and filled the void created by infrastructure shortfall (Olusola et al., 2012) therefore the private investor took over from the politicians.

2.5.3 Political instability and rancour

Nigeria has a long history of political instability with series of military coup de tat and changes in leadership. This unstable political climate has implications for policy stability and advancements, especially policies that are intended to attract private investors (Kennedy et al., 2015). Political risk inhibits the growth of PPP and its associated benefits. In the study of Mills, (2010); there are three broad divisions of political risk namely: (1) Expropriation, Confiscation and nationalization (ECN) (2) Strike, Riot and Civil Commotion (SRCC) (3) and Currency risk. Anderson, (2009); also classified political risk into Expropriation, Currency instability and Political Violence. He further described expropriation as a situation when a host nation seizes a company's development rights or facilities and its products for the host nation's own use, usually under the guise of the national interest. It can also be in form of incremental steps taken by a host nation (i.e. discriminatory laws/tax payments, imposition of import duties on capital equipment etc.) with an unstated but discernible intention to frustrate foreign investment (Fatehi-Sedeh and Safizadeh, 1989; Jonathan and Ramamurti, 2003). However, the investors are worried on partnering with government in providing infrastructural facilities because of political instability and previous involvements in PPP (Oyedele, 2012). Almost every PPP involving the government some years back has failed or ended in disagreements and litigations because of change in government. Projects in Nigeria are mostly rushed (Babatunde et al., 2016) through the executive council most especially towards the tenure of the incumbent government despite stakeholder's advice; this is done because of re-election fever that normally affects politicians. Politicking nation's infrastructure facility is an adverse effect on thriving of PPP which can serves as a critical barrier to finance and infrastructural growth (Oyedele, 2012) in Nigeria.

With the array of arguments challenging the concessioning exercise in Nigeria, it has become glaring from findings that bribery and corruption are part of the reasons for the failure of PPP (Adetola et al., 2013) which supposed to be a government business in

curbing the menace. The management of politics reform is what we should acquire from other countries or authorities. The road leading to reform and PPP is an extensive and difficult one (Akintoye et al., 2011). It is most especially challenging when it comes to the area of governance and anticorruption which is believes to be an interface between politics and the economy. Therefore it should not be surprising that aggressiveness cannot work when pushing reforms (Okwaro et al., 2017) and a wisely thought-out approach for managing the process of the politics. Several forms of the reform bills are yet to be considered by National Assembly not to talk of been pass into law (Akintoye et al., 2011). Previously, the executive are always pushing through their PPP programmes without considering the regulatory framework process. It is high time to learn how to manage the politics of reform and make sure the bills are passed (Adetola et al., 2016). The ambition of Nigeria government at the moment is how the nation wil be ranked as one of the top developed nations before 2020 and the shortest caught is to deal decisively with corruption syndrome of bribery and re-contracting infrastructures to politicians which will not assist the development of PPP.

2.5.4 Corruption

Corruption is a major issue in Nigeria's public procurements, with more than one-third of business firms hoping to part with gratifications or payments to civil servants in order to secure government contracts (Babatunde *et al.,* 2014). In most instances, between 20-60 per cent of government spending on procurement is lost due to financial leakages and malpractices within the Nigerian public sector (Olusola *et al.* (2012). Despite the huge government budgets over the years for the provision of critical infrastructures, Nigeria continues to experience gaps between government policy and output expectations (Adeniyi et al, 2011). However, procurement regulation has improved lately (Babatunde *et al.,* 2014) although large-scale corruption and political favouritism remains a key factor affecting effective public procurement especially when implementing PPP projects (Famakin et al. 2012). Various efforts to reform public procurement policies has been made, the most significant of which is the Public Procurement Act (Famakin et al. 2012). The procurement act regulates public procurement in Nigeria and aims to minimise (Adeniyi et al, 2011) the abuse of rules, processes, and standards in the award and execution of public-sector contracts.

A ministry official who spoke in anonymity said most of Nigerian politicians are mostly used to secure contracts from government expecting kickback from the private investors. As a matter of fact, the official acknowledged that public procurement system is a preferred option of bribe collection (Adetola et al., 2016). It is high time for Nigerians to promote the esteemed ethics in themselves, which can revive various Nigerian economy and social values that have been corrupted in standard by incorporating tested end-user stakeholders for infrastructural development programmes. There is no doubt that corruption has contributed to the implementation of PPP (Oyedele, 2012), given the nature and conditions of Nigeria as a nation, it is inevitable to ignore the impact of government officials (stakeholders) in carrying out their duty at appropriate time. Some projects might be socially or politically challenging if the stakeholders were not involved (Oyebanji et al., 2013) in implementation and operation. Stakeholders will continue to hold government responsible for mediocrity and excellence service delivery.

2.5.5 Poor Management of Project Stakeholders

Poor management of project stakeholders is a major challenge in Nigeria's PPP procurement. According to (Adeniyi et al, 2011), most early PPP projects in Nigeria, had cases of stakeholder agitations ranging from land disputes, environmental concerns among others, with some of them ending in court actions and litigations against the government. As argued by (Adetola et al., 2016), the issue of end-user stakeholders' agitation in Nigeria may be attributed to a number of factors including poor effort on the part of the government in encouraging policy enlightenment to citizens prior to projects' commencement. Ibem (2010) bemoaned the relative apathy of many Nigerian administrators towards engaging citizens on projects designed to benefit them. This poor communication often results in series of petitions, protests, and even riots in many host communities. In providing a way forward for Nigeria's PPP, Abdullahi (2010) emphasized the need for all effective management of all stakeholders including host local communities. Stakehoders role should be clarified in order to avoid duplication of functions (Akintoye et al., 2011) policy confusion and mixed signals. There should also be clarity of rules and regulations through the government stating clearly the guidelines, consequence of character, expectations (Babatunde et al., 2016) and notice of principles should in case of any misunderstanding. Communication analysis with end-user

stakeholders must be incorporated deliberately at the beginning of any PPP programme. The end-user stakeholder should also be properly managed through the flow of information (Olusola et al., 2012) and awareness which are fundamental requirements for any successful PPP initiatives. Generally, the study of stakeholder gives a clear knowlegde of value and interests of end-user, attitudes and nature. The private investors should be given the opportunity to enlighten the end-users (public) on how PPP can facilitate the infrastructure growth through user pay charges. This will be on long term arrangement between the government and the private party.

2.6 Chapter Summary

Public Private Partnership (PPP) is a partnership of the public and private sectors in the financing and development of public infrastructure and facilities (roads). The global financial crisis in recent times has brought the unwavering interest in PPP in Nigeria. This occurrence has been seen generally by many countries as the new cost-effective paradigm. Countries like United Kingdom, United State of America, India, and China etc. have benefitted a lot from the provision of infrastructure by the private sector through PPP. The key strategy mechanism that is being used to transform public services is Public Finance Initiative/Public Private Partnership (PFI/PP). Many PFI projects having capital structure of 90% to 10% Debt equity ratio has also being financed, since its inception. There are various forms (models) of PFI/PPP procurements. These comprised Build Operate Transfer (BOT), which is the most popular globally. Other models in PPP include Design, Build Finance and Operate (DBFO), Design, Build Operate (DBO), Design, Bid Build (DBB), Build Own Operate (BOO) etc. Many more procurement methods have gained considerable attention from private corporations, government, and academics are as follows: DCMF (Design, Construct, Maintain, and Finance), LROT (Lease, Renovate, Operate, and Transfer), BOOR (Build, Own, Operate, and Remove), BLTM (Build, Lease, Transfer, and Maintain), and BLT (Build, Lease, and Transfer). DBFOOMT (Design, Build, Finance, Own, Operate, Maintain, Transfer), DBFOT (Design, Build, Finance, Operate, Transfer). The governments are progressively turning to the private sector as a supplementary source in order to meet the funding gap on infrastructure. The provisions of

facilities through private financing have different methodologies. PPP mobilizes private entity more efficiently in terms of successful delivery of service arrangements.

The understanding of PPP in Nigeria has not been encouraging. Historically Nigeria has not had consistent investment in infrastructural facilities. The global economic meltdown has also resulted in tremendous pressures leading to rising costs of developing projects, which cannot be completely met only by the government without the involvement of private investors. This led to the Nigerian governments developing majority of infrastructural projects through PPPs. Presently, the provision of infrastructural facilities has improved with the adoption of PPP which created more involvement of the private sector in delivering large-scale and multifaceted infrastructure projects across Nigeria. The partnership of government and the private sectors in the construction of public infrastructure and services is established on the concept that government has no business in construction of some infrastructure and services in order to ensure value for money.

Nigeria still has overwhelming challenges with the delivery of essential public infrastructural facilities and basic amenities. This suggests a significant task ahead of Nigeria in terms of infrastructural challenges. The federal government came up with an institutional framework that distributes particular roles and responsibility to several bodies and how the bodies will be operating amicably with the government agencies. With all the various infrastructural challenges that confronted Nigeria, the popularity of PPP is however on the rise, especially in the area of roads construction and aviation industry. These physical infrastructural facilities were tipped as important enablers galvanising social service delivery, industrial growth and facilitating the movement of persons and goods. Under these conditions, the potential benefits of PPP in roads and aviation sector unlock opportunities to maximize economic returns. With the advent of PPP, several projects were delivered and commissioned in Lagos Nigeria. The four major concessions projects that were considered in this study are; Muritala Muhammed Airport 2 (MMA2); Lekki-Epe toll road; Apakun Muritala Muhammed toll road and Lagos-Ibadan expressway respectively. The study adopted two PPP toll road projects as case study viz-a-viz; Lekki-Epe toll road and Muritala Muhammed Apakun toll road. Documentary appraiasal identifying projects history and delivery were discussed. Five challenges confronting PPP infrastructural deliveries were identified from this study. This includes, transparency and Competitive Procurement Process; lengthy Procurement Timelines; political instability

and rancour; corruption and poor management of stakeholders. Managing contract is very important for effective running of PPP contracts, particularly where issues of disputes, claims, planning and variations are effectively dealt with in a way to ensure the performance of PPP is not affected. The effective management of conflict when encountered could provide a good enabling environment for all end-user stakeholders in order make the PPP project active.

CHAPTER 3 END-USER STAKEHOLDERS AND PUBLIC PRIVATE PARTNERSHIP (PPP) ROAD PROJECT

3.1 Introduction

This chapter addresses two important concepts of this study, which are the concept of end users and stakeholders. The first section addresses the nature of end users in PPP projects, relevant theories on end users and some of the challenges facing end users in PPP projects. The second section of the chapter introduces the concept of stakeholder, stakeholder management, stakeholder analysis and relevant stakeholder management theories. The chapter is then culminated with a brief summary.

3.2 End Users in PPP Road Projects

End-users are the final consumers of construction developments and secondary employers of companies (Babatunde et al., 2016) involved in any construction developments. Olson and Swenson, (2011) and Xiao et al., (2013) in their preliminary studies condemn the ignorance of end-users desires during the construction conference in North America. There is just a little or no improvement on this since then. Communication lapses between clients, end-users, and project sponsor were emphasised by some authors around the world (Olusola et al., 2012; Sopha et al., 2013; Knoeri et al., 2016). Companies needed to do more research on what are the needs of end-users (Egan et al., 2012). According to Andrae (2015), end-users are the regular users of the infrastructure services, which are used to fulfil their desires and wishes in accordance with their profile (Financial capital, human and lifestyle). End-users are seen more frequently as an unlucky impediment or an unconcerned stakeholder (Sopha et al., 2013) in most parts of the world. End users can also be referred to as an organisation or individual that really uses an artefact, as contrasting to an organisation or individual that procures orders, authorizes or pays for it (Business Dictionary.com, 2011). Every construction development should hence, bear in mind the desires of end-users during and after the construction development (Beckers et al., 2015). This shows that consideration must be given to end-users throughout the period of the project lifecycle (Adetola et al., 2016) and not just meeting as usual.

Arnstein (2015) described end users' involvement as a concept of hierarchy of citizen participation. The philosophy encouraged the involvement of "citizen" stakeholders to assist the choice procedures made by people, including those relative to design and planning. Arnstein hypothesized the hierarchy of citizen participation in terms of control, power information and manipulation (Hebert and Chaney, 2012) considering the relationship between the community and government using a ladder as a symbol for growing access to managing power (see figure 3.1)

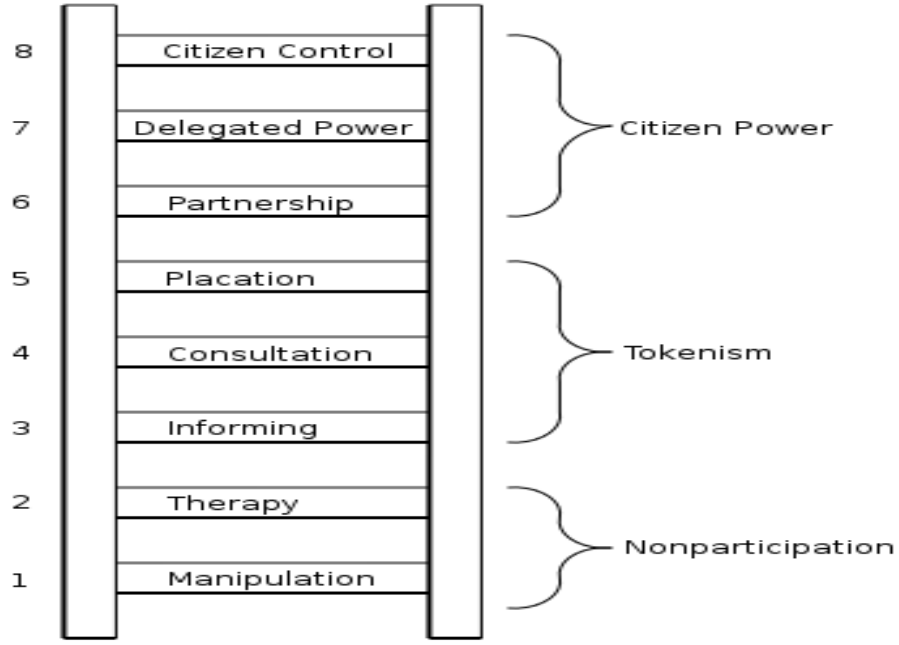

Figure 3.1: Ladder of Citizenship Participation

Source: Bang the Table (2017)

This shows the general integration between government and community in power sharing, preparation stages and policy decision-making (Abel et al., 2013). However, it is a reality that end-users represent the feeblest link in PPP road project (Warkentin and Willison, 2009). Researchers (Wallace et al., 2012; Park and Ryoo, 2013; Van Bruggen et al., 2013; Arnstein, 2015) have examined various theories that can contribute to end-user interests. Indeed, the theories were examined among individuals, groups and company (Sopha et al., 2013) for effective environmental attitude. Theories partially applicable to end-users were discussed in this thesis and will be limited to agency, organisation and system theory.

3.2.1 Theoretical underpinning of end users' involvement in PFI/PPP projects

In order to study the needs of end user stakeholders within the right theoretical perspective, this section evaluates relevant theories that address the needs of end user (Beckers et al., 2015). Agency theory, organisational theory and system theory are considered in this section of the study. These theories were discussed in order to show how importantly end-users interest should be when considering PPP projects.

3.2.1.1 Agency Theory

This is a theory that was originated in the early 1960s and 1970s for risk sharing among groups or individual (Ballwieser et al., 2012; McCormack et al., 2013). Lan et al., (2010) define agency theory (AT) as a "Contract which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent''. The fundamental principle of this theory relates to human nature (Ballwieser et al., 2012). The perspective of this theory is established on the principle of divided interests between owners (principal) and manager (agents) ignoring the interests of end-users (Song et al., 2015). The inclusion of end-user interests is not paramount (Ballwieser et al., 2012) when issues are discussed (see figure 3.2)

Dobbin and Jung, (2010) assumes that the interest of the principal and the agent are different, which prompted both parties to promote their personal self-interest (Kunz, 2015). Prior literature advocated that two primary characteristics can be assumed (Pradelski and Young, 2012) for their actions: information irregularities between the parties and conflicts of interest.

Information irregularities:

- Different forms of information are made available to both insider (manager) and outsider shareholder (Ley et al., 2011) but end-user are left out completely

- Principal are worried about the agent for not carrying out their duties as scheduled (Fayezi et al., 2012) but ignore end-user

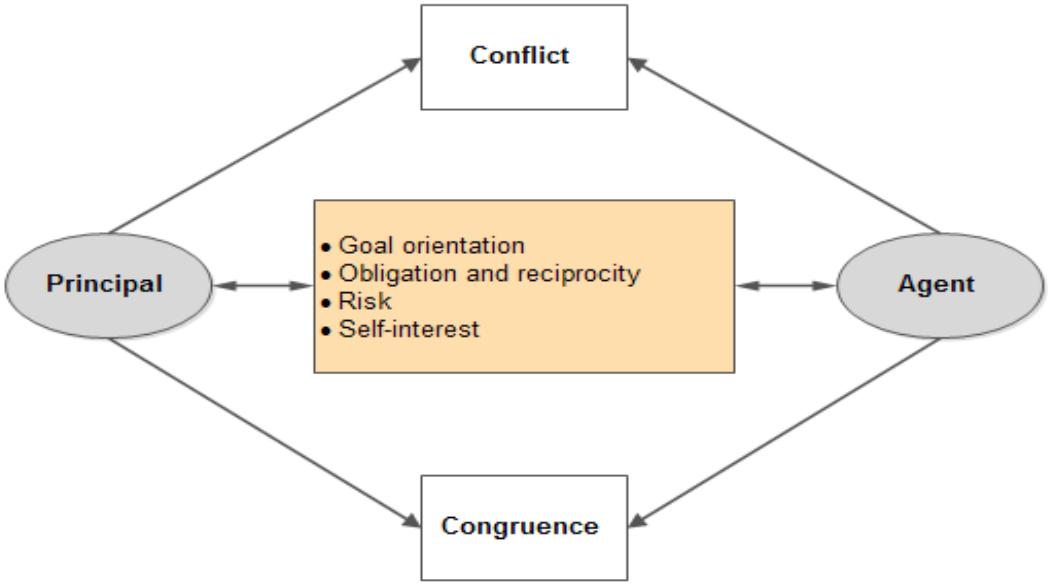

Figure 3.2: Agency theory.

Source: Islam (2014)

Agency theory (AT) has other shortcomings apart from the above mentioned irregularities; other protracted problems of AT are:

- The theory focuses on instant performance at the expense of long-lasting growth (Dechow et al., 2011) of end-user
- Managers capitalised on their wealth at the expense of end-user in terms of excessive wages (Song et al., 2015) and baseless benefits
- Attitudes of both parties towards risks are different

Despite various perspectives of researchers on AT, series of studies were considered (Segrestin and Hatchuel, 2011; Fayezi et al., 2012; Namazi, 2013; Clarke, 2014) on the usage of the theory for effective economic, legal, normal science, management and corporate governance but the studies did not address the fundamental problems of end-users (Heracleous and Lan, 2012), which really need critical re-examination and alternative conceptualisation development about their interests in the industry. After the advent of AT which addresses only principal and agent relationship on divergence of

interests, academic researchers (Fiss, 2011; Fiss et al., 2013; Cornelissen et al., 2015) believed that additional theory is needed to explain what can unite the interest of individual. In order to get this done (Fiss, 2011) taught of the link that can harmonise interest and human behaviour together was informed which led to the birth of organisational theory.

3.2.1.2 Organisational Theory

Tracing the history of organisation research, organisation behaviour (OB) needs to be understood as a field of study that examines the human performance in organisational situations, showing the boundary between human performance and the organisation with the organisation itself (Fiss, 2011) see table 3.1. At the beginning of the industrial revolution in the late 1800s and early 1900s, German sociologist (Weber, 2009) rooted for the modern organisation theory which believed that the ideal organisational form should be represented based on the model bureaucracies on absolute authority, legal, order and logic (Encyclopaedia of Small Business, 2007). Based on Weber's idealized structural arrangement, workers' responsibilities are clearly defined and behaviour is controlled closely by procedures, policies and rules (Kennedy and Fiss, 2013). The studies of the theory provide the social organiasational effect on the attitudes and behaviour of individuals (Weber, 2009). It also includes their physical appearance on organisation showing performance, survival and success (Encyclopaedia of Small Business, 2007) with communal effects of environments, including cultural environments on organisation, political, resource and task but failed to address the importance of end-user (see table 3.1)

The real objective of approach towards the people in the organisation is the Weber's theories of organisations concern (Hatch and Cunliffe, 2013). Certainly, the workforce, with its personal weakness and inadequacies, was considered as a potential harm to the efficiency of any system (Shafritz et al., 2015). Even though the theories are regarded obsolete, Weber's opinion on bureaucracy provided a significant insight into the commencement of authority, division of labour and efficiency procedures (Kennedy and Fiss, 2013). The history of organisational research needed to be traced (Hatch and Cunliffe, 2013) in order to show their missing link for end-user interests (see table 3.1)

Table 3.1: Organisational Evolution

CONCEPT	PIONEERS	PHILOSOPHY	OB ATTRIBUTES
Scientific Management	Frederick Taylor (1911)	Time and Motion Studies. Finding most efficient way	Maximize cost, Task specialization, maximize output
Principle of Management	Henri Fayol (1916-25)	Management Principle Training in use of principle	Order, Equity, Division of work, Discipline
Human Relations	Eltonmayo (1933)	Psychological factors-job Satisfaction, Team work	Paying attention to workers needs and Satisfaction
Decision Making	Herbert Simon (1947)	Bounded Rationality Optimization of Goals	Hierarchy of goals, Effective use of resources
Socio- Technical	El Trist and Kw Bamforth (1951)	Social Systems view means that organisation is an open system	Fit between social and technological factors
Behaviour	Douglas Mcgregor (1961) Rensis Linkert (1967)	Individual needs and importance of participative management	Cohesiveness, Loyalty, Commitment and Employers Management System
Strategic Management	Alfred Chandler (1962)	Established Strategy, then Structure is established	Strategy/Structure fit need to adapt to environmental changes
Contingency	P.R Lawrence andJ.W Lorsh (1967)	Structure firm to meet environmental demand	Integration fit
Quality	Deming (1971) and Juran (1974)	How to detect and eliminate defects	Instil pride in quality, focus on customer satisfaction

Source: Ruiz et al., (2013)

Weber's organisational theories were supported by Henri Fayol in the early 1900s (Fiss, 2011). He is accredited with classifying staff recruitment, strategic planning, employee guidance and motivation, which are significant functions of management in nourishing and creating a successful organisation (Weber, 2009) but forgot to establish the interests of end-user (Hatch and Cunliffe, 2013). It is absolutely glaring that this theory is keen on human behaviour not the interests of human (end-user). The system of how the human character should be managed is important (D'Arcy and Green, 2014) and also the tools of

living in a comfortable environment are inevitable. Theory that galvanizes the human behaviour with the environment later emerged (Abraham, 2011) as the system theory.

3.2.1.3 System Theory

Adam et al., (2014) theorized as a common method to the knowledge of system behaviour through the concept championed by Ludwig von Bertanlaffy after branding the theory as general systems theory. The theory is created as alternatives to orthodox models of organisation behaviour. The systems could be manmade (electrical, computer systems etc.) or natural (solar, digestives systems etc.). The theory shows that the organisations, like living organisms are made up of several modules of subsystems (Coetzee and Van Niekerk, 2012) that must work together in harmony for the bigger system to succeed. The success of the theory relies on interrelations, synergy and interdependence between several subsystems (Hatch and Cunliffe; 2013). The systems can either be open or closed systems (Abraham, 2011). Closed systems are regarded as been autonomous and isolated from the outside world through traditional theories like organisational theories which failed to recognize the environmental influences that will have positive effect in organisation (Encyclopaedia of Small Business, 2007). This failure led to the embracement of open systems by researchers in the 1960s (Abraham, 2011; Hofkirchner and Schafranek, 2011; Hatch and Cunliffe; 2013) which advocate for human ideology and more holistic approach to environment but not given an iota of consideration to end-user interests.

The effect of environment has emotional impact on open systems which can be termed as either general or specific (Zenger et al., 2011). The general environment comprises of four influences that originate from the topographical area in which the organisation functions (Abraham, 2011) such as legal/political environment, economic conditions, quality of education and cultural values. The specific environment discusses the interaction between the competitors and business enterprise, network of distributors, suppliers and government agencies (Hatch and Cunliffe; 2013). The system has a strong impact on management as a way of thinking about managing techniques (Coetzee and Van Niekerk, 2012) that would allow managers to relate to one another in different specialities, as well as to external environmental factors. Academic researchers (Zenger et al., 2011; Von Krogh, 2012; Grant, 2013) are far away from using a single theory of organisation. The study continues

with additional knowledge through academic research (Boumgarden et al., 2012) on the subject that flourish and changes in the manner of improved communication that give rooms for research opportunity through feedback (Buede and Miller, 2016) but has not accommodate the interests of end-user. Looking at the roles of the three theories together, you can hardly find which of the theory that really has the interests of end-user at heart.

3.2.1.4 The roles and insights from the end user related theories in this study

The three theories provide important insights into the need to involve end users and all stakeholders in planning and implementation of successful projects (see table 3.2). However, what is particularly lacking in all the theories discussed above is an organised and comprehensive appraisal of elementary attributes of end-users with respect to awareness on infrastructural benefits (Knoeri et al. 2015). Considering, the relative comparison between the three theories and manner of approaches, showing their strength and weakneses for end-user interests (see table 3.2). The theories were based on various interests mostly based on personal gains.

Table 3.2: Classics of Organisational Theory

Numbers	Agency theory	Organisational theory	System theory
1	The theory discusses the relationship between a principal and the agent	This theory examines the influence of individual, groups, and structure on behaviour within an organisation	This theory put efforts on the environment and how changes can influence the organisation
2	The theory is engaged by a principal to carry out a task on their behalf	It focuses on improving productivity, by understanding the employees on their personal actions and behaviours	Widens the theoretical aspects for viewing the behaviour of organisations
3	Principals will bear the cost of agency for monitoring agency character because of a lack of trust in the agent	Organisational behaviour of groups and individuals can be anticipated, but you have to understand the situations	It is designed to deal with multifaceted tasks
4	Ownership and control are separated with the	To examine organisational behaviour, one needs to move from an insight and common	It aims in meaningful study of organisation and

	application of the theory	sense tactic to a systematic analysis	their management
5	Conflicts of interests between the directors and shareholders arises because of the separation of ownership and control	Systematic study is used to develop predictions of behaviour	It is used to facilitate interaction between organisation and environment

Source: Shafritz et al., (2015)

Having gone through all the theories, some other effort were carried out by Abraham Maslow's hierarchy of human needs (Kremer et al., 2013) which came closer to end-user interests in terms of food, shelter among others (see figure 3.2). During the examination of cultures (Adiele and Abraham, 2013) in which large numbers of people living in poverty were considered (such as India) it is glaring that people admire properties as their prefered needs than interests of their surbordinate (see figure 3.2). But, this should not happen, as agreed by Maslow, individuals that are not capable of basic functional needs should be catered for (Kremer et al., 2013) irrespective of their cultural background.

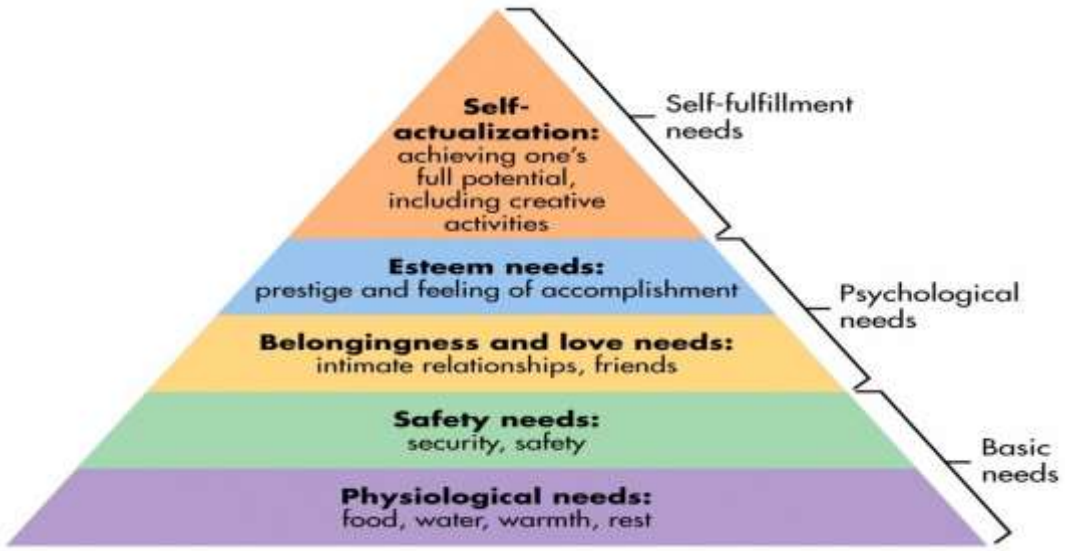

Figure 3.2: Manslow's Hierachy of Needs

Source: McLeod (2007)

This theory presented two significant effects about individual. Firstly, the peoples need to be motivated by various incentives because of their different needs to attain managerial goals (Kremar et al., 2013). Secondly, the needs of people change over time, indicating that new needs are essential for the people in lower hierarchy (Maslow, 2013) which can be understood if necessary steps are taken.

3.2.1.5 Implications of Theories

Despite the strategic approach of these theories, they have not been specifically tailored to address the relevance and complex needs of end user stakeholders in relation to PFI/PPP (Oyedele, 2012). The PPP will aid all these theories by bringing infrastructural development such as roads, hospitals and so on closer to the end-user (Adetola et al., 2016). Road is one of the essential infrastructural amenities that is indispensable for human needs in a built environment (Todorovic et al., 2015). A key feature that provides social and economic contribution to growth and development of a country is efficient and effective road network, which will provide jobs and social services to the end-users (Jiboye, 2011). Successful delivery of road infrstaructure through PPP projects have continued to linger as one of the major challenges confronting developing and developed countries of the entire world.

The Nigeria government acknowledge the understanding of the human needs from the period of colonialism to the present civilian administration in terms of initiatives and infrastructural projects (Oyebanji et al., 2011). Apart from water or electricity in Nigeria, end-users demand infrastructure service like good road to satisfy their precise necessities and desires (Olusola *et al.,* 2012). Future and present desires of end-users have to be assumed if caring environments are to be generated for them. Lack of consideration for such desires leads to the end-users not satisfied (Kennedy et al., 2015). Every construction development in Nigeria is expected to consider the desires of end-users during and after the construction development (Babatunde *et al.,* 2014). This shows that consideration must be given to end-users throughout the period of the project lifecycle and not just having meetings with them as usual.

End-user gratification depends not only on the result, but on the way it is attained (Finch, 2015). Like other nations across the globe, managing end-users in Nigeria is not easy, as it

takes a lot of energy and time that involves presentation, planning, interviews, workshops and remark. Also, problems are expected to come up during construction stages (Olusola *et al.*, 2012). At the final stage of the project, the role of end-users frequently leads to battles, which is a symbol of mishandling such needs from the beginning of the project (Kerzner, 2013). Future and present desires of end-users have to be assumed if caring environments are to be generated for them. Considering such desires leads to less critical and satisfied end-users (Kaya et al., 2012) before the inception of any PPP projects. A successful project requires a habitable environment with proactive and innovative strategy for sustainability. Some certain factors that are critical to the development of a successful project should be addressed at the beginning of the project development (Bakar et al., 2009) in order to avert any future challenges. The categories of end-user applicable to road in PPP projects (Olusola et al., 2012) must be established (see table 3.3)

Table 3.3: Types of end-user in road project in Nigeria.

1	Private Car	6	Lorry
2	Taxi	7	Trailer
3	Private Bus	8	Motor Bike
4	Public Bus	9	Bicycle
5	Pedestrian		

The end-user needed to be satisfied (Kaya et al., 2012) irrespective of their background, race, religion, gender and culture.

3.3 End-Users Satisfaction in PPP Road Project

The architect of success achievement is success factors (Muller and Turner, 2010) which would add value to the project development (Bakar et al., 2009). Satisfaction differs relatively by individuals, organisations, project types, industries, life cycle phases and nationalities (Kaya et al., 2012). With the development of PPP, various researchers (Olusola et al., 2012; Babatunde et al., 2016; Adetola et al., 2016) have engaged the concept of agreement to improve the understanding of PPP strategy for infrastructural

development (Liu et al., 2014) and proposed success principle of end-user satisfaction. End-users satisfaction has usually been identified as one of the main drivers to realize a successful implementation of a road project (Marciano et al., 2014 and Aitken et al., 2014). In spite of the increasing literature on end-users in all area of specialization (Kallbekken et al., 2013) there is little or no comprehensive literature on the interests of end-users in PPP road project. Infrastructure project like toll road with the aid of PPP should have a significant impact on the economic activity and quality of life; hence its satisfaction to end-users is very important (Rohman et al., 2017). The involvement of various end-users with diverse interests and expectation for infrastructure projects may be established under PPP schemes. End-user satisfaction could be measured through the success of infrastructure projects with the aid of PPP (Ng et al., 2010). Hence, infrastructure projects should satisfy the end-user not only presently but also for future generations by balancing social, environmental and economic dimensions. Satisfying end-user needs with the implementation of PPP in developing country like Nigeria, is to integrate project social benefits into the success principles for infrastructure projects (Rohman et al., 2017). The project social benefit signifies social benefits to the end-user, as part of social endurance. Toll road development through PPP should provide equitable insights to end-user.

Existing literature (Kaufmann et al., 2013; Schultz and Peltier, 2013; Mouillot et al., 2014) has usually examined the effect of a successful project based on two groups of factors. The first established factor is the strategic factors (Marciano et al., 2014) which includes project task, government support, project design and planning. The second factor (Ihuah et al., 2014) is the tactical factors which includes end-users' consultation, workers' selection, and training. Combination of these two factors will pronounce the success of any project development irrespective of environmental factors, political risk, economic degradation, timing, and decentralisation and participation factors with benefit realization (van den Beemt-Tjeerdsma et al., 2016). Proposed success principles of end-user satisfaction and other stakeholders' satisfaction performance should be in terms of quality, time, and meeting users' requirements (Müller and Turner, 2010). These performances are not sufficient to quantify the total success of any infrastructure project various features about end-users, such as, expriences of doing PPP infrastructure projects, the rapport between parties within the private and public sectors among others are experimental to be vital to the realisation of PPP projects because poor end-users stakeholders management could

simply lead to conflict and misunderstanding (Aaltonen, 2011) see figure 1.2 and 2.6 respectively. Tunde and Ojo (2011) recommended that public utility, location, serviceability, project ownership/land dispute, legal issues, and total cost of the project are parts of essential factors that determine success of PPP road project. All these factors will form the bedrock of the proposed framework for the end-users' stakeholders' management in PPP road project. End-user contributes to the successful implementation of any PPPs (Villaba-Romero and Liyanage, 2016) which created enabling partnership that can produce benefits to the host community of the project. These benefits needed to be pursued if properly implemented by the private investors. The interaction between these developments will guarantee successful outcomes of the project.

Meanwhile, Rohman et al., (2017) in their findings concluded that concentrating on environmental and economic dimension is not extensively considered in measuring the success of toll road projects from a community perspective as the project end-user. For that reason, it is essential to improve end-users satisfaction from a social perspective in terms of lasting community benefits. Four factors were established from 15 valid attributes in measuring project social benefits for end-users satisfaction in PPP road project, these include:

- Provision of peace of mind for end-users (psychological needs)
- Equal access to public facility and provision of good service
- Prevailing smooth traffic and regulation compliance environment
- Improve the quality of life and community engagement.

All these benefits are going to be part of the factors that will be considered in developing the proposed framework to be used in solving the problems of end-user stakeholders along the project community.

3.4 Benefits Realization of End-User in PPP Road Project in Nigeria

Project success benefits are realized through organisational performance (Zwikael and Smyrk, 2011). The approach of PPP is gradually accepted to deliver innovative infrastructural facilities (Solheim-Kile et al., 2014). Various countries started PPP development from transportation sectors like roads, bridges, rails and so on (Jang, 2010; Jang, 2011) and later extend their usage to other sectors such as health, education, water and waste treatment (Treasury, H. M. S. 2003), energy as soon as the value for money benefits are established and public sector expertise is proven. The flow of value that arises from project can be considered as project benefits. Bradley (2016) defines benefit because of change, which is observed as positive by the end-users stakeholders. Equally, constraints are consequences of change (Garlan et al., 2012) which is perceived as negative impediments by the end-users of any infrastructure. A benefit is the quantifiable progress resulting from the effect that is perceived as an advantage (projects@contacts.bham.ac.uk). Procurement is one of the several routes suited for acquiring infrastructure (Akintoye et al., 2011) in a developing country like Nigeria.

Meeting end-users' benefits during construction works is difficult (Mohammadpour et al., 2015). In fact, there are no particular methods in place for meeting end-users' obligation throughout the construction phase (Pemsel et al., 2010). Therefore, each construction project must provide the benefits for its end-users during the entire construction period (Pemsel and Muller, 2012). Although, customer experience management (CEM), which is mostly unknown or overlooked task is used subconsciously to establish some private qualities (Herbert and Chaney, 2012). This has established that end-users must given due attention throughout the stages in the project lifecycle (Pemsel and Wiewiora, 2013). Innovations are needed to develop end users' satisfaction and business results (Mohammadpour et al., 2015). With some reasonable effort, at least most construction developments needed to provide various opportunities to the end-user having facial encounters with them during construction process (Pemsel and Wiewiora, 2013) which is not appropriate. End-users can come to be captive, where their views do not really matter, because the things they are requested to do might not fall within their area of knowledge (Pemsel and Muller, 2012). Likewise, it was proclaimed that success differ at various points in the life cycle of a project which depends on stakeholders perspectives. This

strengthens the need for stakeholders' inclusion in a successive project (Drouin et al., 2013) if they are truly considered by private investors. The stakeholders don't lobby for projects (Herbert and Chaney, 2012), they earn it through their significant roles in the community.

The most important reason for using PPP is when the suitability of project in terms of value for money is noticed (Serra and Kunc, 2015). There must be consideration within the context of domineering objectives when arguments for and against PPP arises (Solheim-Kile et al., 2014). The primary focus of end-users becomes the benefits they will get from the project (Velasco-Elizondo et al., 2013), not the ways by which the services are delivered. Therefore, the end-users focused on the internal participation of project from inception to final stage instead of level of service of the infrastructure (Breese, 2012). The procedure of managing and organising the potential benefits arising from the project should be paramount to the end-users (Bradley, 2016). Benefits are targeted prior to the commencement of a proposed project, with the expectation of realizing substantial benefits before the completion of the project (Serra and Kunc, 2015). Appraising and formulation of project ideas with the organisation in charge of the project should be considered the first and critical step for the end-users in order to ensure successful benefit realization (Bradley, 2016) of the project. Specifically, the benefits of project form an essential part of the business case (Williams and Samset; 2010) which is the root for prioritization decisions and project funding (Maraun et al., 2010). Once accepted, the benefits become the root for the review of the performance of the on-going project. An appropriate appraisal and formulation of such information is quite important (Fageha and Aibinu, 2013). Good business approaches are those that deliver end-users stakeholder's value in terms of cash generation competence (Serra and Kunc, 2015) or the capability to deliver public service value, in case of public sector organisations.

In recent times, various scholars (Bradley, 2016, Jenner, 2016 and Melton et al., 2011) recommended that benefits realization clarify the value and strategy relevance of each project, allowing an increased efficiency of project governance. This is not about only governance, strategic governance is quite important to lead other organisations in working towards the successful delivery of scheduled benefits (Rios et al., 2012). Established organisations of benefit realization have stronger governance (Serra and Kunc, 2015) with their executive managements supporting and prioritising mostly projects with pertinent

benefits. By increasing the efficiency of project governance (Al-Tmeemy et al., 2011) benefits realisations can disputably lessen project failure rates from a strategic point of view. Ika (2009) separated the assessment of benefit related component into Product/Project Success satisfaction of stakeholders and benefits to end-users; project staff with the strategic project management; business achievement and success of client's strategic goals. Lately, Camilleri (2011) splits benefit between project successes (results and benefits) and project corporate success (the success of strategic goals). Zwikael and Smyrk, (2011) also splits benefit into Investment success (financial profit to the organisation) and Ownership success (costs and less benefits). Even though, these scholars have suggested various ways to evaluate the delivery of benefits and the subsequent formation of strategic value to business, this thesis advocates that the delivery of benefits to end-users (Al-Tmeemy et al., 2011) have to be connected to economic gains with the success of extensive business objectives, most especially from the financial point of view.

The direct benefits of end-users should start immediately as soon as the project is awarded whether as contract or concession (Bradley, 2010), because modifications of business create outcomes which prepare actions to realise benefits. Otherwise, modifications of business can also provide intermediate benefits, irrespective of project output (Camilleri, 2011). Benefits of good road network are the direct positive things of that project (Van den Bossche et al., 2011) this stand as the desirable effects obtained by investing directly in PPP road project (Vandenbossche et al., 2013). This can be sighted as an improvement through the reduction of several numbers of crashes, elimination of long queues during peak periods, or provision of shorter routes (Anderson et al., 2012). In analysing the highway benefits, the normal procedure is that benefits are first assessed in terms of physical positions and then estimated in terms of economy (Feldman et al., 2014). Physical positions in terms of numbers of crashes eliminated from the road (Mark et al., 2014) the number of saved travel time and the number of vehicular saved mileage before the turn over or economic interests. The primary benefits of end-users in PPP road project in Nigeria are safety benefits, travel time benefits and vehicle operating benefits (Maek et al 2014). These sets of benefits are the gains which end-user normally capitalises on as dividend of PPP road project.

3.4.1 Safety Benefits

Safety benefits are the outcome of major benefits from transportation developments (Hellinga and Mandelzys, 2011). Safety is also an integral part of individual life as end-user will be unwilling to live, work and play in usafe surroundings (Dempsey et al., 2011). Any construction that accommodates safety during design will definitely minimize possible danger to the end-user (Rohman et al., 2017) and the neighbourhood or community. Hence, end-user should not be blamed as long as the rules governing safety requirements are satisfied (Hellinga and Mandelzys, 2011). Unanticipated arrangement should also be made by private investors for safety of lives and properties (Olanrewaju and Anavhe, 2014) for end-user moving and living in the neighbourhood. The benefits happen when there is reduction in number of crashes or when there is reduction in harshness of crashes affecting the facility or set of facilities because of the development in transportation sector (Tiwari and Jain, 2012). Normal engineering methods can still be used to appraise both the possible crash reduction and changes in harshness (Dempsey et al., 2011) so that end-user will not be badly affected when accident occurs. A standard economic principle for different crashes has to be developed (Schmidt et al., 2016) through the department of Traffic Engineering under the Ministry of works in Nigeria in order to enhance these benefits. This can in turn change the numbers of crashes to monetary benefits (Rohman et al., 2017) and also reduce the travel time of end-user.

3.4.2 Travel Time Benefits

Travel time usually generates the utmost amount of benefit (Macmillan et al., 2014). These benefits are established based on the travel time difference between the incident and the alternative travel time (De Nazelle et al., 2012) which is always expressed as vehicles-hours travelled (VHT) and can be assessed using spread sheets, computer models and travel time runs subject to the level of data available or analysed (Kwon et al., 2012). Upgrading of a road will significantly improve travel time and safety of end-user. When new road are constructed it reduces fuel intake of vehicles (De Nazelle et al., 2012) and vehicle maintenance through save in travel time. The driver and passengers in the vehicle are all inclusive during the assessment of travel time benefits (i.e., vehicle occupancy rates). In various circumstances, vehicle occupancy rates differ between peak and off-peak

periods (Macmillan et al., 2014). Maintenance and fuel cost savings might be included when considering the travel time. All end-users have different travel arrangements (Ivehammar, 2014) based on where they reside; work, character and other factors which will influence travel time. Different conditions may represent various vehicle occupancy rates (Shankwitz et al., 2011). The estimated travel time benefits on the PPP road project in Nigeria can be planned (Adetola et al., 2016) with the introduction of standardized cost-per-hour-per-person data for different automobiles (cars, buses, vans, Lorries among others). The travel time benefits become effective (Macmillan et al., 2014) as a result of newly created lanes in the road project which decreases delays and improve transportation systems. Thus reducing waiting time for commuters (Abrantes and Wardman; 2011) which will bring benefit to the vehicles of end-user and the host community.

3.4.3 Vehicle Operating Benefits

The development of transportation has changed the set of facilities for the benefits of operating vehicles (Tiwari and Jain, 2012). There can be change in operating benefits because the digit of miles driven changes, for instance, a shorter bypass or diversion of journeys or even the numerous stops can enhance the change in vehicular operation (Terveen, 2013).

The digit of vehicle-miles travelled (VMT) is the most shared variable that affects vehicle-operating benefits (Tiwari and Jain, 2013). Once the estimated vehicle miles is changed, the assessment of vehicle operating benefits is measured using standardized cost-per-mile digits for different automobiles e.g. Cars, buses, vans, Lorries among others (Shankwitz et al., 2011). However, if important benefits are anticipated from other kinds of changes in travel characteristics, such as number of speed cycle reduction, number of vehicle stops reduction, and perhaps changes in pavement condition, those benefits can also be projected (Terveen, 2013). These will definitely have a significant impact to the host community of the project. The host community has the right to discuss their needs with the private investors before the commencement of the project.

3.4.4 Community Impact Benefits

These are special effects that PPP road projects have on neighbouring communities, apart from those deliberately affecting the direct users and travellers of transportation services (Greenfield et al., 2015). They are frequently called community impacts or social impacts (Scharlach, 2012) because of their influence on neighbourhood liveability (the quality of residents that work, live or visit the environment) as a result of changes in views, noise, land use mix, walking environment and community unity i.e. the quality of communications among fellow neighbours (Appleyard et al., 2014). Associated impacts on property values can also be involved (Greenfield, 2015) and divergence impacts on vulnerable population groups might be enclosed. Academic researchers (Greenfield et al., 2015; Norouzian-Maleki et al., 2015; Walden, 2015) sighted some examples on how community impacts can influence end-users stakeholder's interests.

- Improve walking and cycling conditions in an environment, and integrating landscapes such as pocket parks and walkways
- Create opportunities for neighbours in order to interact with each other thereby increasing community unity
- New road configuration creates an opening in locating markets, shops and offices in a dejected neighbourhood because of developments to get easy access and safety i.e. the effect on property and land use.
- Creation of bus terminals reduces the effect of rainfall and sunlight, humanizing the views of the neighbourhood (visual effect)

All these mentioned impacts will create economic benefits for the end-user living along the neighbourhood of the project.

3.4.5 Economic Benefits

Transportation ventures can have innumerable impacts on the growth of the community objectives (Agbelie, 2014) such as employment, property values, productivity, business activities, tax and investment incomes (Nijkamp et al., 2012) these can increase the community from individual home to towns and cities, states, nation or even the whole world. Generally, transportation ventures can increase accessibility (Tseng et al., 2014) in

terms of businesses activities in order to deliver goods and services, ability for end-users to access education, gainful employment for end-users stakeholders. Also, transportation costs reduction (Edgar et al., 2014) such as travel time, road and parking facilities charges, vehicle-operating benefits, and accident costs tends to boost economic growth and productivity. In many circumstances, benefits delivery is important, looking from the perspective of end-users who gain from economic transference, which is a genuine benefit (Nijkamp et al., 2012).

The implementation of the PPP road project creates economic impacts mostly in a positive ways (Kopp and Smith, 2013). Those ways can be described as follows:

- New road project connects town, cities and ports, and other types of inter-modal services at those localities and creates new arrangements for the growth of international trade (Alstadt et al., 2012). In various circumstances, the new routes can make business more effective (Diewert et al., 2012) in terms of customer/client relationship during the delivery of goods
- Developed road can increase end-users accessibility (Alstadt et al., 2012) to occupation and education opportunities (increasing their output and wages). This will also increase inhabitants access (Dodgson et al., 2011) to cultural and recreation opportunities by boosting their social welfare and increase access to market and shopping malls in order to save money in travelling to farther places.

- Likewise, creating access to a particular environment can unlock businesses (Krishnan et al., 2015) to more rivalry end-user in the community e.g. caged local customers, which can easily gain more access to city shopping centres in order to increase the business activity within and outside the community (Dodgson et al., 2011). This can boost the infrastructural facilities that have been provided by the government due to the advent of PPP (Babatunde et al., 2016). Facility like drainage will reduce the flooding during heavy downpour that cause hazard to end-user and the host community.

3.4.6 Infrastructural Benefits (drainage)

Provision of infrastructure facility such as drainage system reduces the flooding of an environment (Farreny et al., 2011) has a significant social and economic effect. Better flood protection safeguards road users (end-users) in order to have access into their various homes and the neighbouring road network (Wainger and Mazzotta; 2011). This is used to measure the benefits for developments comparing the delay or diversion it might cause if the services are not available (Eliasson and Lundberg; 2012). The delay and diversion that would be saved by providing better access can be value in term of time gain. Managing end-user needs is very paramount (Babatunde et al., 2016) so as to avert any chaos before the inception of any project.

3.5 Stakeholders Management (SM)

Stakeholder management (SM) is the basic principle of public affairs management, which is relevant to both symmetric and asymmetric communication theory (Williams and Adams; 2013). The method is useful to the success of every single project in all organisations (Waligo et al., 2014). People use this method to win support for others and make sure that project succeed where others fail (Fletcher et al., 2010). Stakeholders' numbers for individual construction projects have increased due to the modern procurement methods. This increment shows that stakeholders needed to be managed. Though, (Akintoye et al., 2011) iterate that participants are more likely not to be in agreement always because of the increased number of stakeholders. Because of this challenge, different interests are represented which can badly influence and at times create some impediments towards projects success (Freeman and Moutchnik, 2013) in any construction community area.

The nature of a singular definition for stakeholder is highly contestable, with over hundreds of definition existing in the academic literature (Freeman et al., 2010). The strategy for stakeholders view integrates both market and resource based view, with the addition of a social-political level (Horisch et al., 2014). According to Freeman (2010), whom all researchers agreed as an early visionary leader on stakeholder theory, stakeholders refers to ``any singular or collective group that can benefit from the

consciousness of a corporation`s objectives''. Another definition by (Tullberg, 2013) is by having an identified lawful interest either by groups or by persons in an organisation. Burchell and Cook (2013) suggest that stakeholder can be defined as claimants and influencers in a business environment. In such case, claimants are referred to as a less privileged groups whose company`s action are affected mostly (Kornum and Mühlbacher, 2013) while influencer`s are the vital and potent groups to the company.

Williams and Adams (2013), considers groups/persons that can be directly affected by an actions or effort of an agency, organisations, system and institution either positively or negatively as the primary stakeholder, while the secondary stakeholder is considered as the groups/persons that are positively or negatively indirectly affected by actions or effort of an agency, organisations, system and institution. Those directly affected are investors, employees, suppliers, and customers while political parties, government, trade unions, NGOs, community groups and neighbours are indirectly affected (Vallaster and Wallpach, 2013). Based on these sets of definitions and analysis, it is clear that any party having tendency of influencing or being influenced by activities of an organisation could be regarded as a stakeholder because of their relationship with such organisation (Freeman and Moutchnik, 2013). In addition, such parties are important to the success and continuous survival of the organisation. Freeman et al., (2010) considered constituencies and individuals that have contributed willingly or unwillingly to the growth of a project bearing in mind the benefits and risks are known as stakeholders. Anticipated successful projects demonstrate exceptional stakeholder's management and ideally follow the process of stakeholder identification, grouping, analysis and management approach design (Aaltonen, 2011). Before stakeholders can be effectively managed, they have to be identified and analysed according to their need. The analysis is an important technique used in identifying all major primary and secondary stakeholders who have vested interest in the project (Winch and Kreiner, 2011) in any part of the universe.

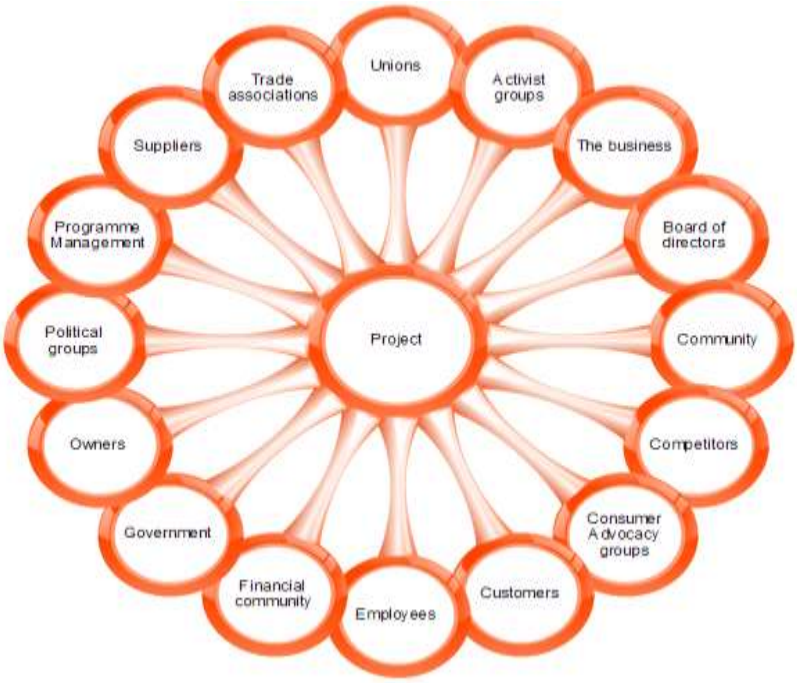

Figure 3.3: Project stakeholders.

Source: Bright Hub Project Management (2017)

The importance of knowing the set of project stakeholders is to be able to analyse the roles of each group when it comes to benefits, implementation and prioritation of stakeholders (Aaltonen, 2011). As soon as they are identified, they can also be analysed based on their business objectivity.

3.6 Stakeholder Analysis (SA)

Stakeholder analysis is aimed to develop a planned understanding between organisation and human landscape, bearing in mind the relationship between various stakeholders and their aspiration (Hunt et al., 2015). It used as a technique to identify the important people who have to be won over (Tullberg, 2013). SA is a procedure used to describe groups or individuals that are likely to be affected by future action in which the interest of stakeholders is evaluated and discussed in a project program, plan and policy (Mitchell et al., 2016). The business process analyst and organisational change analyst usually implement stakeholder analysis (Hunt et al., 2016). SA can assist a project to identify the following:

- Interests of stakeholders who may affect or be affected by the project
- Groups that should be encouraged to partake in different phases of the project
- Potential problems that could disrupt the project
- Risk assessment of the project
- How to reduce possible negative impact and manage negative stakeholders who may be reluctant to participate in the developing process
- Key people for information dissemination during the advanced stage of the project

All these above mentioned identification will benefits the stakeholders during their participation in PPP projects if involved by the private investors.

3.6.1 Benefits of Using Stakeholders Analysis

When stakeholders are involved in projects and decision-making processes, it has greater advantages and disadvantages (Winch and Kreiner, 2011) if rightfully engaged. Stakeholders could make provision of valuable input, which can improve the outcomes and harmonize the organisation (Mitchell et al., 2016). With effective planning, stakeholders' involvement can benefit from using SA to avoid the disadvantages of stakeholder participation (Achterkamp et al., 2013) but on the other hand, involving various stakeholders can lead to impracticable circumstances that may damage the project and lead to disappointment. Establishing the following ideas may induce the imperviousness of the project:

- Having support from influential stakeholders can assist in winning more resources (Orr, 2010). This can make the project successful
- Using the idea of highly influential stakeholders to shape project at early stage will enhance the quality of the project (Ponnappa, 2014)
- Anticipation of peoples reaction towards the project and build for future plan that can win peoples support (Perrini et al., 2011)
- Communicating with stakeholders at early stage (Friedman and Hendry, 2012) ensuring they fully understand the benefits of the project in order to give support when necessary.

Employing all these ideas would boost the practicability of SA and certify the implementation process.

3.6.2 Implementation of Stakeholders Analysis

The implementation of SA generate information about relevant participants so as to understand their intention, behaviour, agendas, interrelations, interests, and the impact or assets they could bring (Silver et al., 2016). This information can then be used to improve strategies for managing stakeholders and to enable the implementation of organisational objectives for future policy directions (Ponnappa, 2014). The process steps are analysed by identifying the stakeholders with their respective interests in power, and understanding the most valuable stakeholders. The analysis will be mapped through recording and later communicate to stakeholders with an effective tool.

Figure 3.4: Stakeholders Analysis Process

Source: Aaltonen (2011)

In order to carry out the procedural approach in implementing the analysed criteria, the following steps are considered.

- The first step is identification of who are your stakeholders
- The next step is to know who to focus on by working out their power, influence and interests

- The final step is to develop a framework to understand the most important stakeholders in order to win their support.
- Use stakeholders mapping to record the analysis
- After the creation of stakeholders mapping, use the tool to plan effective communication (Grant, 2016) with each stakeholder.

However, these processes came as a matter of priority, depending on the affected stakeholders within the corridor of the project.

3.6.3 Prioritization in Stakeholders Analysis

Long list of stakeholders that will be affected by the project in terms of power and interests grid would be positioned in different matrices (Silver et al., 2016). Power measures the influence they have over the project or program (Mitchell et al., 2016) and their level of achievement to either block or advance the desired change. Interest measures are possibly to be affected by the project exploration or change in program, and what level of interest are they engaged (Frooman, 2010). Some of the factors are needed to be considered in assessing stakeholder's power and influence in analysing stakeholders priorities.

- Political status and social economic
- Authority of leadership
- Possession of specialist knowledge
- Control of strategic resources
- Legal or statutory authority
- Formal and informal links to other stakeholders
- Degree of dependence on other stakeholders
- Negotiating position and ability to influence other stakeholders (Grant, 2016) is very important.

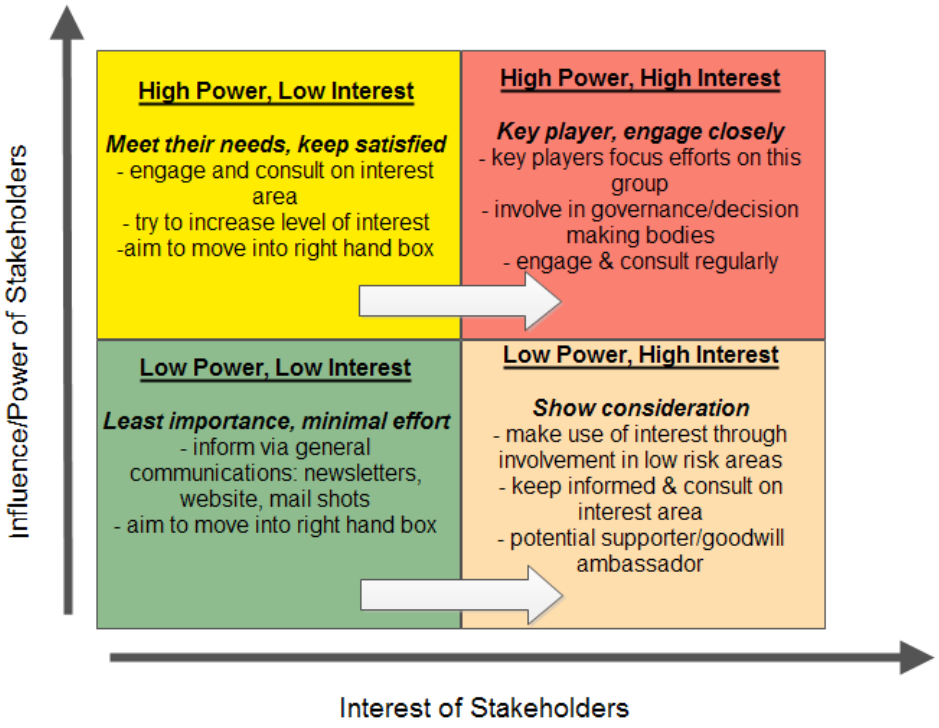

Figure 3.5: Power versus interest grid

Source: Freeman (2010)

The positions shown on the quadrant indicate the actions to be taken when stakeholders are prioritized (Ponnappa, 2014) in a project cycle.

- If a stakeholder has a low level of interests and low level of power that shows there is a low and low on the quadrant and the response indicates **MINIMUM EFFORT** should be taking i.e. Stakeholders can be open to influence because of their lack of interest and power, therefore they should be monitored with less messages.
- If a stakeholder has a high level of interest and a low level of power, this shows the level of power is low and there is no need to change the direction of the business which will definitely keep the stakeholder happy because he/she does not have a lot of power however, because he/she got high level of interest the corporation should **KEEP** them **INFORMED** i.e. stakeholders are interested in the policy but they lack power to do anything, hence they can be supportive with the detail of the project.
- If a stakeholder has a low level of interest and a high level of power that shows the customer is happy, which indicates **KEEPING** the customer **SATISFIED** is

important i.e. avoid stakeholders from gaining interests to another company hence give them enough work but be careful with too many messages

- If a stakeholder with high level of interest and high level of power according to the quadrant, these stakeholders are the **KEY PLAYERS**. When an organisation is analysing matters and deciding what strategy of approach to be used, the key player's stakeholders with high level of interests and high level of power should be given topmost priority i.e. this quadrant shows that they are the key drivers of change and could halt management strategies if not satisfied. Hence, they should be engage fully and put in maximum efforts to satisfy those (Awodele et al., 2011) and keep them in business.

In order to achieve all these objectives, some of the stakehoders theories needed to be established (Freeman and Moutchnik, 2013) so as to corroborate the efforts of stakeholders as a major player in PPP oriented projects.

3.7 Stakeholder Theory

The origin of stakeholder theory could be traced to four fields of academic endeavours (Freeman and Moutchnik, 2013), which are ethics, politics, economics and sociology. In addition, it has been greatly influenced by literatures (Freeman, 2010; Frooman, 2010; Grant, 2016; Mitchell et al., 2016) within the concept of organisational theory, systems theory, corporate planning and corporate social responsibility (Mainardes et al., 2011). Antecedents to the theory could be traced to the United State of America during President Reagan`s tenure in office when a liberal reaction occurred (Freeman et al., 2010). It legitimizes the ideology of the shareholder from the question raised by utopia who now became stakeholder initiator (Taghva, 2017). In response to the movement in America, earlier development of stakeholder theory was popularised by Freeman (2010) through his reviewed book titled "Strategic Management: a Stakeholder Approach". It was widely believed that the book served as the launching of the concept of stakeholder theory into academic realm (Mainardes et al., 2011). Since then, it has been widely used to engender value creations to parties that may influence or be influenced by the activities of organisations.

Based on the works of Freeman (2010), the purpose of stakeholder theory is to identify and model various groups that could be described as stakeholders of a corporation in such a way as to describe and implement strategies for given appropriate regards and attention to the interests of such groups. As a strategic tool for sustainable enterprise, the stakeholder theory of organisational management seeks to establish the categories of parties that are important for achieving organisational goal (Jansson et al., 2016). It has often been stated that the theory is based on the concept of whom and what really matters to an organisation and it aims to establish values and morals with respect to management of an organisation (Freeman et al., 2010). Apart from identifying and addressing the need of each group of stakeholder, the theory suggests the needs for strategies for redistributing benefits and decision making in such a way as to address needs of each stakeholder group (Mercier-Laurent, 2013) thereby ensuring healthy and stable development of the corporation.

Various journals, articles and books (Frooman, 2010; Winch and Kreiner, 2011; Mercier and Laurent, 2013; Tullberg, 2013; Mitchell et al., 2016; Silver et al., 2016) written on stakeholders' theory generally credit R. Edward Freeman as the 'Father of stakeholder's theory'. In Freemans strategic management book reviewed (2010), a stakeholder approach is broadly quoted in the field as being the foundation of stakeholders' theory, although Freeman himself acclaims numerous bodies of literature (Fletcher et al., 2010; Frooman, 2010; Orr, 2010) in the development of his approach, including strategic management, organisation theory, corporate planning, corporate social obligation and systems theory. An associated field of research (Aaltonen, 2011; Achterkamp et al., 2013; Ponnappa, 2014; Hunt et al., 2015) scrutinizes the importance of innumerable stakeholder groups or the concept of stakeholder and stakeholder salience to a specific firm

According to Bowie (2011), the theory posits that all stakeholders have to be taken into account when making decision that can affect their interests within the corporation. As such, the overall goal of the stakeholder theory is to ensure that stakeholder' interests are protected within the organisation. Bebbington et al., (2014) suggest that the theory consists of both managerial and ethical aspects. At the ethical level, it is concerned with the responsibilities of an organisation regarding how their stakeholders should be treated. This is majorly concerned with the categories of stakeholders that are influenced by the organisational activities (Orji, 2010), rather than influencing the organisation itself.

Nonetheless, failure to consider interests of such stakeholders is capable of affecting organisational survival and its leadership (Freeman, 2010). The managerial aspect of the theory stresses the need to consider and manage interest of a certain groups of stakeholders (Fernando and Lawrence, 2014). This aspect is particularly concerned with the categories of stakeholders that are capable of exert various levels of control over the organisation (Bebbington et al., 2014). The managerial aspect of the theory has attracted significant research efforts (Fernando and Lawrence, 2014) on managers' concern as it has been widely employed to influence or manipulate powerful stakeholders in order to gain their support (Gray et al., 2013). In either case, the theory suggests that each of the stakeholders must not be viewed in isolation (Freeman, 2010), as the interest of one class or group of stakeholder might affect the others.

Stakeholder theory has become a focal point for business morals, and an unconventional way of governance (Jansson et al., 2016; Sternberg, 2013). It has been widely expressed across literatures that stakeholder theory is a basis for potential growth in social science and achievement of ethical values (Harrison and Wicks, 2013). At the inception, stakeholder theory was prevalent with non- governmental body, government, media and business (Mainardes et al., 2011). However, it was lately it becomes clear that stakeholder theory advocates measures for articulating business objectives as well as what brings an organisation's stakeholders together (Jansson et al., 2016; Mitchell et al., 2016). According to Oghojafor et al., (2012), suppliers, shareholder, customers, creditors, and employees in Cadbury Nigeria were classified as a set of stakeholders group with primary level of responsibilities. These groups are sheltered by law and they are expected to engage in healthy competitions towards achieving the collective organisational goals (Nyombi et al., 2015). At the secondary level of stakeholders, the environment and other parties that could be influenced by the activities of an organisation are also referred to as its stakeholders (Oghojafor et al., 2012). Such categories of stakeholders also have certain level of responsibilities that are capable of affecting achievement of organisational goals (Freeman et al., 2010). The cooperation between the company and all categories of stakeholders are areas of dependant (Jansson et al., 2016) in the working environment.

Stakeholders can even be classified into internal, connected and external (ICE). Freeman and Moutchnik, (2013), described the internal as the employees and managers, while the connected can be seen as the source of finance for example shareholders, distributors,

suppliers etc. Finally, the external aspects of it are the general public e.g. government, press/media, pressure groups' etc.

Recently some scholars (Freeman et al., (2010); Friedman and Hendry (2012), Freeman and Moutchnik, (2013); Sternberg, 2013; Phillips, 2013) did justice on the topic of stakeholder theory which demonstrate research and hypothesizing. However, Tullberg, (2013) argued that stakeholders theory has numerous separate aspects that is equally supportive and can be described as descriptive, Instrumental and normative.

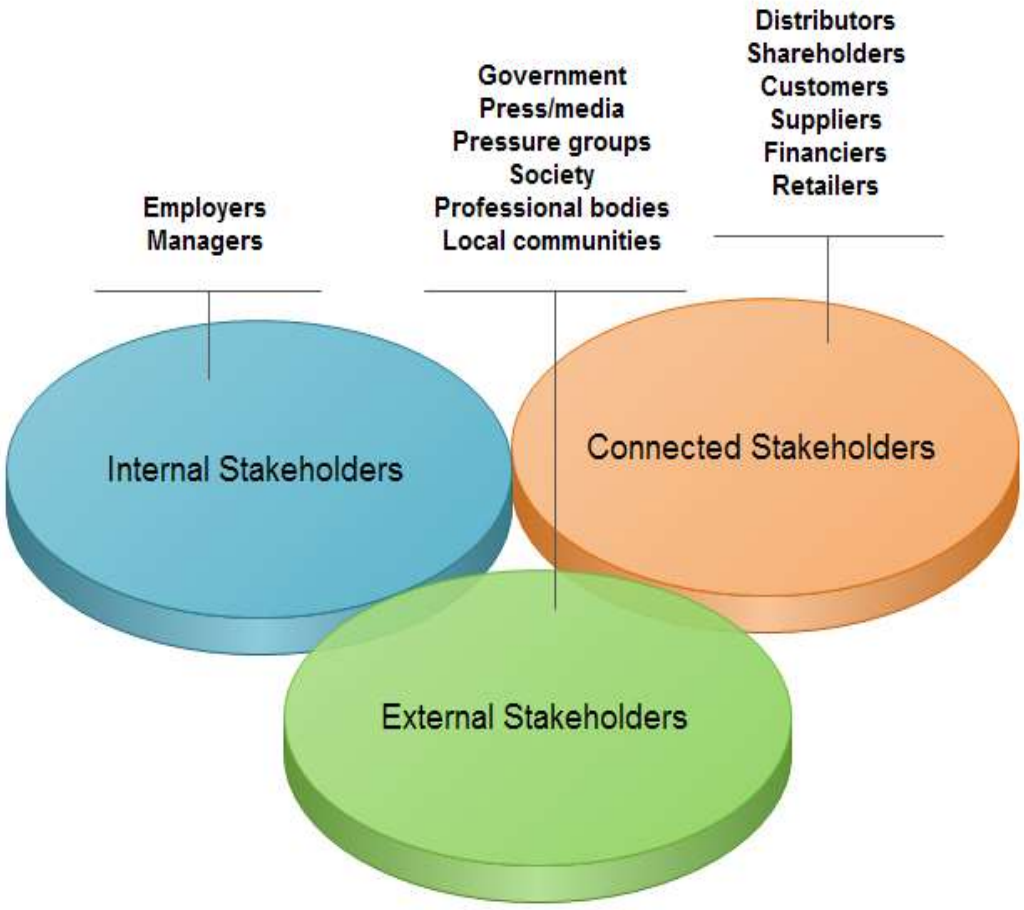

Figure 3.6: Types of Stakeholder

Source: Understanding different stakeholders and their perspectives. Gonzalez-Zapata and Heeks (2015)

3.7.1 Types of Stakeholder Theory

The stakeholder theory consists of multiple and distinct aspects, each of which are mutually supportive of one another (Tullberg, 2013). These are descriptive, instrumental and normative aspects of stakeholder management. The justification of stakeholder's theory in management literature is advanced from the origin of normative validity, descriptive accuracy and instrumental power (Dodd and Hynes, 2012). Instrumental and descriptive can be classified as theory of social science while normative can be seen as ethics based theory (Tullberg, 2013). The three aspects of stakeholders' theory are interconnected, have dissimilar significances and are mutually supportive of one another.

3.7.1.1 Descriptive Stakeholder Theory

The theory is usually employed to clarify and define precise characteristic and behaviours of individual/corporate (Ackermann et al., 2011; Jones, 2010). Usually, it's described how corporations manage their day-to-day relationship with customers, employees and other classes of stakeholders (Oghojafor et al., 2012). Falsifiable claims must be included when concentrating on the theory of organisational science (Jones, 2011; Christensen et al., 2014), recommended one out of at least two stakeholders that seems to be distinctive based on the theoretical plans, which authenticate the theoretical claims. There should be enough proofs to indicate that claims by some stakeholders from the company are unjustifiable (Ackermann et al., 2011), and has been peddled by some managers. There has been support for this type of general claims, which has been carefully verified by some scholars (Jones, 2011; Mainardes et al., 2011; Dodd and Hynes, 2012; Gray et al., 2013; Sternberg, 2013; Bebbington et al., 2014). Although this is empirically practicable and is becoming more interesting theoretically but cannot achieve potentials for descriptive theory based on the stakeholder attitude (Tullberg, 2013). For instance, a descriptive theory of a company would propel stakeholder theory into the statuses of foremost establishment in theories by creating wealthy research potentials (Harrison and Wicks, 2013). Winch and Kreiner, 2011; Jones, (2011); Bosch-Badia et al., (2013); through thier initial work described descriptive theory as a way of managing an organisation, nature of a

company and thinking about managing the senior manager (Mainardes et al., 2011). Managing social data dissemination from stakeholder's perception is important and can be ascribed to differential opinion of the stakeholder based on the life span of the company (Tullberg, 2013). The methodology of descriptive theory does not give room for amendment between traditional industries, wages, developmental ideas and stakeholders hence tolerating illustrative suggestions (Jansson et al., 2016). The overall goal of descriptive theory is not only to understand how corporations relate with their stakeholder (Christensen et al., 2014), but to also identify variance from standard of behaviour and interaction, thereby implementing corrective measures. Based on the theory of social science (Tullberg, 2013) descriptive and instrumental stakeholder's theory are similar but with some little differential thought.

3.7.1.2 Instrumental Stakeholder Theory

Instrumental theory tolerates any stakeholder theorist with an alignment of social sciences believing the outcome of obtaining positive performances whenever they are established (Sternberg, 2013). A contingent theory is an instrumental theory, which predicted the outcome of any positive performance (Harrison and Wicks, 2013). It is used to distinguish both link and non- link amongst traditional industries and stakeholder management e.g. development and profitability (Tullberg, 2013). This theory does not allow economist to make some fundamental hypothesis of human behaviour in nature such as dishonesty (Christensen et al., 2014). This quality prevents the complications of connection with over obscuring human nature, which are despondently complex in model, or over clarifying human nature, which are poorly predicted (Harrison and Wicks, 2013) in the research world.

Conventional statistical methodologies are used for various modern instrumental studies of company social responsibility where stakeholder's perspectives were referenced in terms of explicit or implicit theory (Bosch-Badia et al., (2013), which they concentrated on the following techniques.

- The relationship between the technique behind the strategy formulation and comportment of stakeholders pressure (Mitchell et al., 2016)

- The relationship between financial and social presentation (Ackermann et al., 2011; Bowie, 2011; Harrison and Wicks, 2013) amongst stakeholders.

It is also concerned with understanding whether individuals/groups who partake in the business e.g. employees, customers, suppliers, stakeholder and so on are been supported strongly by the managers (Christensen et al., 2014). If there are mutual reliance and teamwork between the company's manager and stakeholder, there will be economical benefit for the company (Tullberg, 2013). There is no supposition that managers should rely on cooperation with stakeholders (Harrison and Wicks, 2013), but if they do, they will gain a competitive status.

Harrison and Wicks, (2013) further distinguishes the company's performance in terms of compensation that:

- Companies with extraordinary level of excessively executives will perform less than the companies without extraordinary level of unduly executives
- Companies with multiple repetition of contract award that has been done by the employee will perform less than the companies that follow due process
- Companies without adoption of poison pill will surpass the companies that use these patterns.

The most important aspect of this theory is that companies should respond to the concern of all their stakeholders, and not segregated stakeholders. They should not follow financial performance alone but overall performances of their organisation. Although, Instrumental and descriptive theories are social science oriented while normative theory is basically established on ethics.

3.7.1.3 Normative Stakeholder Theory

Theorists amongst stakeholders take a different tactics from conventional way of (functionalism) social science (Bowie, 2011). This group concentrate on normative subjects instead of using methodological way to examine hypothesis and gathering of data (Harrison and Wicks, 2013). The viewpoint is different from the functionalism established in empirical theory (Tullberg, 2013). This method of inquest encompasses the specification of knowing the right duties of stakeholder theory on managers, most

especially the comparative significance of duties to shareholder and other groups of stakeholder (Freeman et al., 2010; Jones, 2010; Jones, 2011; Miles, 2012; Freeman and Moutchnik, 2013). Collectively, the phrase amongst these researchers is that company's should consider stakeholders as ``ends'' (Evans and Baker, 2012) or sharing the interest that have an essential value (Tullberg, 2013) amongst stakeholders.

The theory is also essential in interpretation of ethical strategies for the management and operation of companies (Dodd and Hynes, 2012) and is centred on honest principles on ways of better performance in activities by both government and actors of the industry (Mainardes et al. 2011). Competition and occasional conflict interests is the arena of organisational attraction of institutional vision of the theory (Friedman and Hendry, 2012). Due to sustainability of organisation in terms of agreed resolutions and negotiations, the performances of stakeholders on situation of power are different, and these endanger their common interest. Company's attention cannot be shifted from marketplace achievement in the direction of human politeness coming up with the intentions of business understanding, which can be mutually facilitated (Freeman et al., 2010; Evans and Baker, 2012; Miles, 2012) amongst the stakeholders. These scholars look for another method of protecting business actions in a productive manner. Individual actions and thinking on business activities are different, and it upholds conceptual schemes, images, language and metaphor (Jones, 2010; Harrison and Wicks, 2013). Framework with this study assesses rapport in pact with metaphysical and ethical principle.

Stakeholder from normative point of view advocates the business ethics incorporation as personal project proposal (Freeman et al., 2010). It also, identify Kantian capitalism (Freeman et al., 2010; Bowie, 2011); for impartial contract, coupled with radical approach (Harrison and Wicks, 2013); and righteousness. The normative aspect of stakeholder theory has been unambiguously justified by some studies (Hansen and Vedung, 2010; Orji, 2010; Mainardes et al. 2011), creating alternative to legitimate opinions, such as property privileges (Freeman et al., 2010; Mainardes et al., 2011; Tullberg, 2013). Theorists have industrialized techniques for companies to improve such normative fundamentals (Freeman et al., 2010) that can make them sound ethically good.

Ackermann et al., (2011), during one of their research found a foundational reference in the field of stakeholders' theory, having been cited more than 1,000 times that ethics and

values are offspring of human behaviour. Mitchell et al., (2014) resulted to a typology of stakeholders based on the characteristics of legitimacy, power and urgency as a tool from human behaviour. This has demonstrated how stakeholders are so determined to clinch to what rightfully belongs to them.

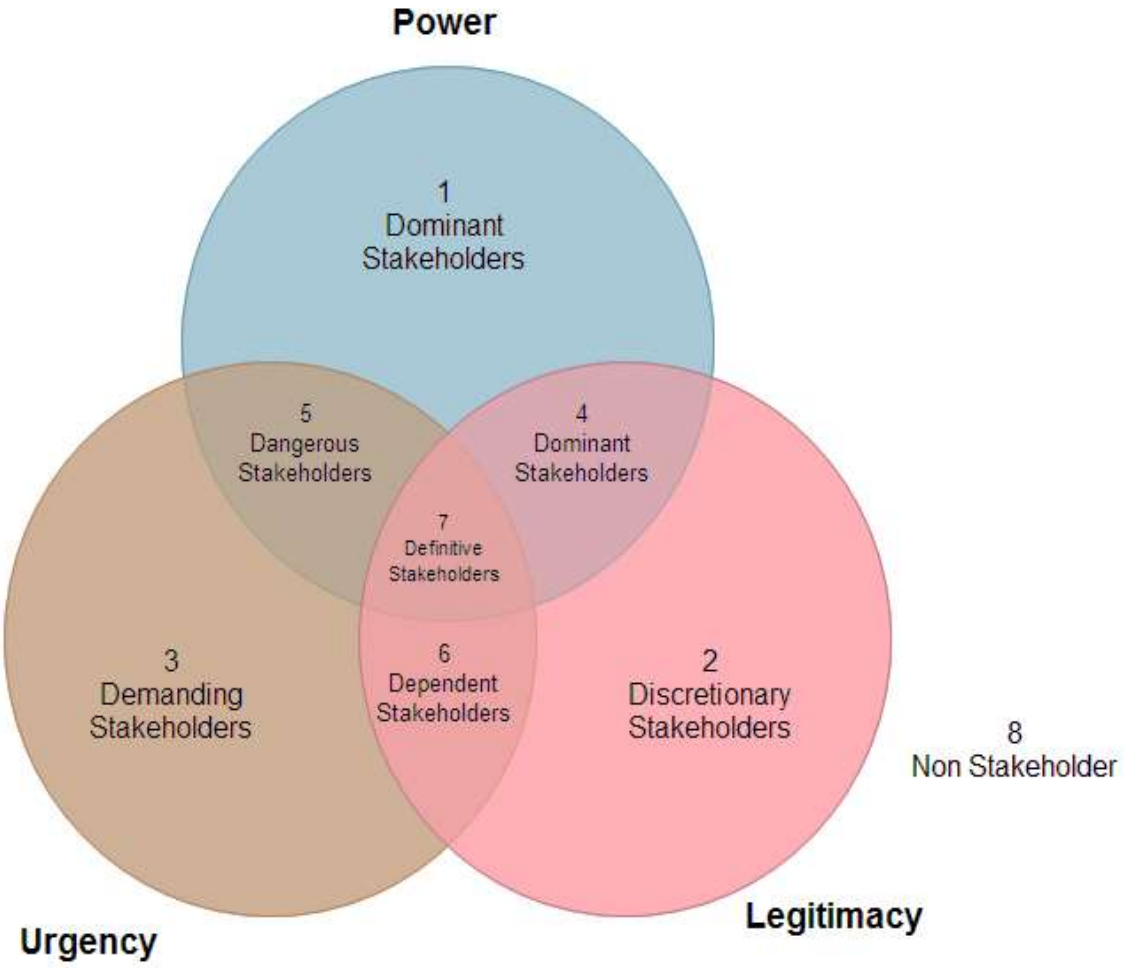

Figure 3.7: Typology of Stakeholder

Source: Strategic Management: A Stakeholder Approach. Freeman (2010)

Legitimacy: Desirable or appropriate actions of an entity to have a general perception in accordance with the background which is socially constructed in terms of individual or organisation.

Power: This is an act of doing what is not supposed to be done initially. It may be coercive, normative, or useful.

Urgency: When an immediate action is needed to determine the organisational response on stakeholder's request, consideration of time sensitivity is very important.

Considering the amalgamation of the three ethical values that has transformed into human nature (Mitchell et al., 2016) in stakeholders theoretical practice, it has been established that stakeholders still encounter some challenges despite the theoretical underpinning of managing them in any PPP projects. These challenges are peculiar to end-users as well because of the relationship between them as public sectors.

3.8 Challenges Facing End Users Stakeholders in PPP

In realising the targeted or anticipated benefits from PPP projects, end-user stakeholders are often faced with different forms of challenges (Akintoye et al., 2011). These sets of challenges might vary from rules and regulations applied to vehicles owners; interchange; barrier and toll charges effects.

3.8.1 Impact of changes in vehicle rules and regulations

Changes in rules and regulations guiding vehicle is an essential part of PPP road project (Nwoye and Iyiola, 2016) where signs and markings will be used as a source of information for the end-user. This will definitely change the orietations of end-users (Narayanaswami, 2017) on how the rules would be observed without hindrances. A typical example of conceivable regulatory changes includes restrictions placed on the freight effective vehicles and reductions of speed limits (Blincoe et al., 2015). If freight effective vehicles are regulated, it will reduce the amount of traffic delays they can cause thereby increasing the project benefits (Ciuffo et al., 2015). Speed limit regulatory was always connected with road widening (Guerra et al., 2012) in PPP project which sometimes have negative effect on end-users because of the speed control. It is also normal to control the speed of the end-user with the introduction of interchange (Blincoe

et al., 2015) at various crossing along the neighbourhood of the project. This will bring sanity in form of safety to the host community.

3.8.2 Interchange

End-users relocates their houses, businesses, markets and recreation centres because of a newly constructed highway interchange (Munira and San Santoso, 2017), thereby converting a road with grade intersections to an arterial highway which normally gives limited access to host community. For instance, the end-user can suggest minimum output requirements in terms of interchange and traffic volume capacities at various locations since they are accustomed to the area in which the project situates (Javed et al., 2013). The privte sector should learn how to construct an underground surface interchange which will has a low environmental effect on the neighbourhood along the project route instead of constructing a massive interchange structure above the ground level (Regan et al., 2010). However, many car users along the project neighbourhood will consider an alternative route if such barrier are encountered. Interchange can either be positive or negative (Parkhurst and Meek, 2014) depending on the situation of end-users and the host community. At times it might cause a barrier for end-users that are not driving.

3.8.3 Barrier Effect

An innovative expressway creates a barrier to pedestrian and cycling (called restriction), in order to isolate the neighbourhood (end-users) from danger and increase the need to drive, for example, making parents to transport their children to school (Næss et al., 2011) with route restrictions within the host community. Though, there are essential physical barriers to pursuing sustainable infrastructural facilities along the neighbourhood (Xia et al., 2013) which can be sorted out with the host community without any infringement on end-users right. Walkable blocks and several connections that will connect streets (Su, 2017) to facilitate easy accessibility for end-users such as pedestrians, bus riders and bicyclists should be constructed. Bicycle trips reduction and walking are the barrier effect (Xia et al., 2013). The wideness of road induces high speed of vehicles (Su, 2017) which causes massive discomfort and safety worries for those who use transit, walk and bike

along the neighbourhood of the project. The introduction of toll plaza along such road will creates a barrier effect (Asher, 2014) that will discourage the eagerness of car owners along the project route. But the car owners along the host community are uncomfortable with the idea.

3.8.4 Toll Charges

Political hostility to road tolling has been a major concern in various countries (Chen and Hubbard, 2012). The argument is that toll charges are too exorbitant and un-tolled access has been established to provide an alternative route but not attractive due to heavy traffic (Carpintero and Barcham, 2012). Most developed and developing countries have progressively revolved around toll roads to meet their infrastructural demands (Geddes et al., 2015). End-users satisfaction has usually been acknowledged as one of the major drivers to accomplish a successful implementation of any innovative policy initiatives (Marciano et al., 2014, and Aitken et al., 2014). The policy makers must adopt options that will promote end-users interests (Yusuf et al., 2014). There should be more compressive approach towards end-users stakeholders' tolls acceptability on charges (Kallbekken et al., 2013). Toll roads always cause burdens on the end-users and create traffic problems for host community. Nigeria cannot be left out on how stakeholders should be properly engaged (Babatunde et al., 2016). An adequate policy should be made available to private investors as a guide in order to engaged stakeholders in any PPP project.

3.9 Evaluating the end-user stakeholders needs along the project route

Oyewunmi et al., (2017) considered some approaches that can be used in evaluating end-user stakeholders' needs, it is now established that end-user stakeholders are paramount in any PPP construction project. Both primary and secondary end-user stakeholders must be informed and engaged at the inception stage of any construction project (Babatunde et al., 2016). National policy in Nigeria sets out documents on PPP recognizing the steps that should be taken in order to certify the usage of private investment where necessary (Olusola et al., 2012), so as to address the infrastructure gap and develop public facilities

in a sustainable manner (Oyewunmi et al., 2017).These policies are in line with the Government's obligation in terms of accountability and transparency, which must ensure that the transfer of duty to the private sectors follows the utmost international practice (Opawole and Jagboro, 2016) that is practicable for use which will accommodate the need of end-user stakeholders. Failure to justify the needs of end-user stakeholders in PPP projects will not only jeopardises the successful implementation of the project but but also their continuation in the nearest future (Stathopoulos et al., 2012). However, the necessary inclusion of the following will enhance the end-user stakeholders' needs when undergoing any PPP road projects.

- Infrastructure coupled with productivity, social inclusion and equity, quality of life and environmental sustainability are the bedrock of end-user stakeholders' needs for any successful implementation of PPP projects (UN-Habitat, 2013). These will improve the economic opportunities of millions of end-user stakeholders along the project routes thereby humanising and supporting urban prosperity.
- Consultation and communication with general public (end-user stakeholders), corporate stakeholders, affected community and customers is very important with private sector participant in PPP project with a view of emerging mutual reception and understanding of the aims of the public and private parties (Jones et al., 2013). There must be adequate consultation with end-users and other stakeholders from the public authorities prior to the commencement of any infrastructural project.
- Social welfare analysis in terms of transportation implementation on how end-user stakeholders will have alternative route during construction in order to avoid congestion pricing from the public transport operators (Rouhani et al., 2016). The service providers (Private sector) providing the essential services need to be wary of the communities concerns in order to avoid social outcry and unacceptable outcomes on private car owners.

In spite of these requirements, attention that has been paid to these guidelines from National policy are inadequate (Dada and Oladokun; 2012). The fact behind this negligence can be easily traced to the establishment of PPP in Nigeria (Oyewunmi et al., 2017). The government does not see PPP as an advantage of service delivery to end-user stakeholders but rather means of raising the much needed off budgetary for financing infrastructure projects (Akintoye et al., 2011). The National policy through their documents enhanced the performance of PPP regulations in Nigeria (Draft National

Transport Policy, 2010) recognizing the involvement of end-user stakeholders. Involving private investors in government projects is essential in order to deliver quality services to the community (Auzzir et al., 2014). This is necessary to overwhelm any flaws from the government side. Engaging stakeholders in providing facilities and infrastructure will definitely enhance the quality value of neighbourhood (Freeman and Moutchnik, 2013) in which the project is situated. The fusion of both private and public sectors in terms of conceptualization of framework will produce an output that will enhance the practicability of PPP arrangement.

Researchers have widely studied selected features of end-user stakeholders' marginalisation in PPP road projects through an industry-wide survey study (Auzzir et al., 2014; Freeman and Moutchnik, 2013; Oyewunmi et al., 2017) among others.

Chan et al. (2003) established some of the most significant methods in alleviating futher demotion which include: improve communication among end-user stakeholders and developing cordial relationship among all parties involved in accordance with global PPP rules and regulations among others. Some of the diverse philosophical perspectives that normally generate various frictions between the involved parties were established through interviews, and are specified as contractual agreements and various needs of end-user stakeholders (Consoli, 2006). Essentially, the most important cause of poor relationships between the involved parties is friction. Tang and Shen, (2013) from their research established some factors that may affect end-user stakeholders' relationships in PPP infrastructure project such as road. This was linked with the extracted summary from Construction Industry Board (1997) archives on how significant trust should be apportion in the relationships among end-user stakeholders at the briefing stage (see table 3.4 for the identified factors). Blyth and Worthington (2010) revealed that comprehensive and clear communication was a vital characteristic in briefing. This is used as a guide in final recommendations of end-user stakeholders' needs in PPP road project in Nigeria.

Table 3.4: ***End-user Stakeholders related factors that affect PPP Projects****.*

Factors	**Explanations**
Experience of private investor	The private investor should have related experience of briefing the end-user stakeholders on PPP project
Clear management structure	The private investor needs a clear management organization structure briefing with end-user stakeholders.
Knowledge of private investor responsibility	Knowledge of the private investor responsibility is needed to guide the end-user stakeholder along the project route
Skillful guidance and advice from project manager	Project manager should give appropriate guidance and advice to end-user stakeholders during community briefing
Holding workshops for end-user stakeholders	Workshops for end-user stakeholders should be held regularly.
Good facilitation	Good facilitation of briefing should be given to end-user stakeholders periodically
Selection of briefing team	Briefing team needs proper participant of end-user stakeholders selection for proper PPP achievement
Clarity of roles of stakeholders	Roles of end-user stakeholders should be clarified clearly during the implementation of the project
Sufficient consultation with stakeholders	Private investor needs sufficient consultation and briefing the end-user stakeholders at all times
Experience of stakeholder group	End-user stakeholders' experience of attending briefing should be prioritised
Balance of the needs/requirements of different end-user stakeholders	Needs/requirements of different end-user stakeholders need to be balanced.
Knowledge of consultants	Knowledge of consultants should be considered.
Knowledge of statutory and lease control of	Knowledge of statutory and concession

Factors	Explanations
the project	period control of the project are needed in briefing the end-user stakeholders
Team commitment	Team commitment should be clear to end-user stakeholders
Honesty	Honesty among end-user stakeholders is critical for briefing.
Openness and trust	Openness and trust should be built among end-user stakeholders
Open and effective communication	Briefing needs open and effective communication amongst end-user stakeholders
Agreement of brief by all relevant parties	Agreement on the brief should be obtained among all relevant parties of stakeholders

Source: Construction Industry Board (1997)

3.10 Conceptual Framework

The conceptual approach towards the involvement of community stakeholders in any construction projects will minimise the unnecessary agitation that might arise from the host community. With the use of prevailing literature a conceptual framework that designates how the cooperation between private and public sectors with positive individualities can create a platform for all end-users stakeholders in order to contribute meaningfully towards the success of the projects. The role of private sectors in PPP arrangement is to give supplementary value to facilities made available by the public sectors (Auzzir et al., 2014). This will justify the inadequacies in public sectors with observed competences in terms of operational management, finance and expertise.

However, to establish a decent PPP plan, earlier studies (Akintoye et al., 2011; Olusola et al., 2012; Auzzir et al., 2014; Babatunde et al., 2016; Opawole and Jagboro, 2016) have recommended that both private and public sector should suppliment one another in terms of organisational arrangement; shared risk and benefits and mutual coordination. Then, later both sectors will have the in-depth knowledge of PPP arrangement and its basic

principles. This framework recommends an outstanding output that is expected if both private and public sectors engaged in true partnership.

Having established through literature the benefits and challenges facing end-user stakeholders in PPP project, it is necessary to integrate them together with the challenges facing PPP from Nigeria point of view in order to form a conceptual framework based on the findings. The salient points from the findings will metamorphosed into a validated framework which can be used in a research world. The listed below are the summary of those findings from the extant literature:

Challenges facing PPP in Nigeria:

- Transparency and Competitive Procurement Process
- Lengthy Procurement Timelines
- Political instability and rancour
- Corruption
- Poor Management of Project Stakeholders

Benefits Realization of End-user Stakeholders in PPP road Project in Nigeria:

- Safety Benefits
- Travel Time Benefits
- Vehicle Operating Benefits
- Community Impact Benefits
- Economic Benefits
- Infrastructural Benefits (drainage)

Challenges facing End-user Stakeholders in PPP Project:

- Impact of changes in vehicle rules and regulations
- Interchange
- Barrier Effect
- Toll Charges

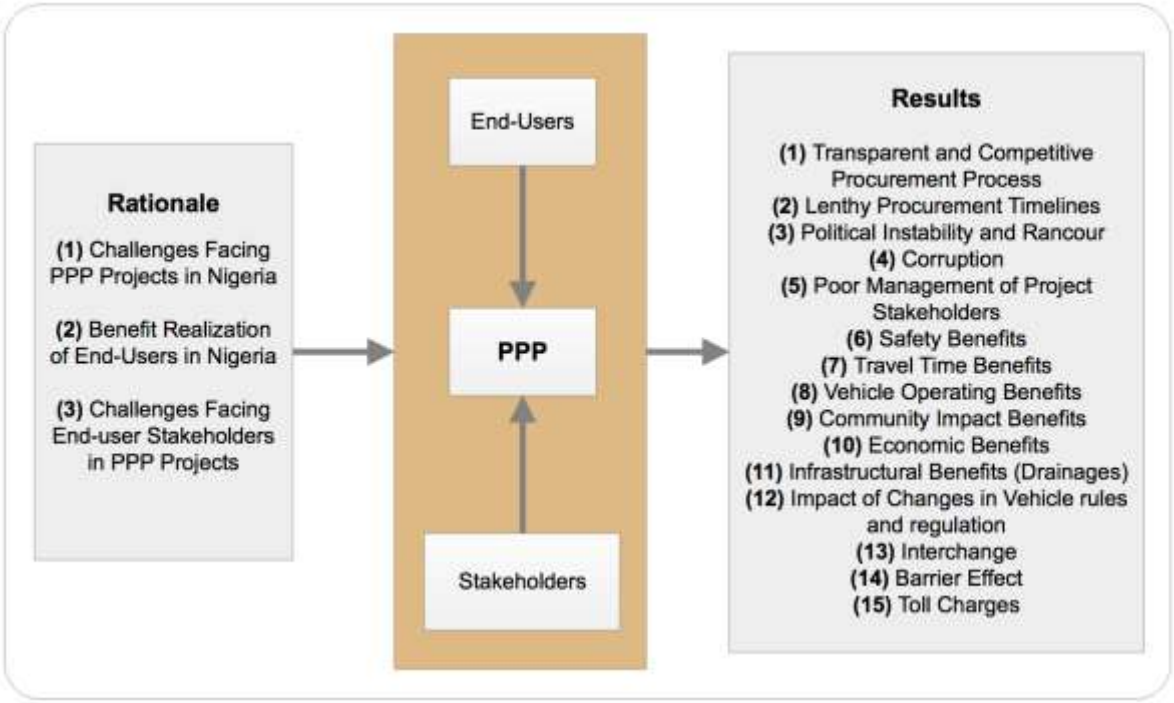

Figure 3.8: Diagram of Adopted Conceptual Framework

3.11 Chapter Summary

End-users are the final consumers of construction developments and secondary employers of companies involved in any construction developments. However, literature has suggested that PPP plan can never be successfully realized without the collaboration of public sector (end-users stakehoders). Despite the successful deliverance of numerous construction projects, some PPP projects have encountered challenges from end-users stakeholders' opposition. There is just a little or no improvement on this presently which requires government to synergise both private and public sectors together in achieving successful PPP arrangement. Communication lapses between clients, end-users stakeholders, and project sponsor were emphasised by some authors around the world. What is lacking in all the theories affecting human needs is the organised and comprehensive appraisal of elementary attributes of end-users with respect to awareness on infrastructural benefits. The complex nature of PPP projects involving end user stakeholders has no adequate and well-structured ways of managing them and their diverse interest, which has eventually caused the negligence of end-user stakeholders. End-users are the regular users of the infrastructure services, which are used to fulfil their desires and

wishes in accordance with their profile (Financial capital, human and lifestyle), so it is important for private sectors to do more research on what are the needs of end-users. Most of the established theories for end-users are not fully capable of fulfilling their diverse interest, making them to be an unlucky impediment or an unconcerned stakeholder throughout the world.

The negligence of end-users stakeholders' interest has been acknowledged as a salient factor that destabilizes the success of PPP projects in Nigeria. Managing end user stakeholders in Nigeria PPP projects has become essential because PPP projects needs support from the general public through the procedure of transparency in order to get end-users stakeholders involved in all phases of the PPP arrangement. Literature revealed the effect of a successful project based on two factors, which includes project task; government support; project design and planning. While the second factor; includes end-users consultation, workers selection and training. End-users satisfaction has usually been identified as one of the main drivers to realize a successful implementation of a road projects. Combination of these two factors will pronounce the success of any project development irrespective of environmental factors; political risk; economic degradation; timing; decentralisation and participation factors; and benefit realization. Relative comparison between three theories and manner of approaches, showing their strength and weakneses for end-user interests were discussed showing that the theories were based on various interests mostly based on personal gains. In spite of the increasing literature on end-users in all area of specialization there is little or no comprehensive literature on the interests of end-users in PPP road project. The categories of end-user applicable to road in PPP projects were established. The most important reason for using PPP is when the suitability of project in terms of value for money is noticed.

Literature also revealed that public utility, location, serviceability, project ownership/land dispute, legal issues, and total cost of the project are parts of essential factors that determine success of PPP road project. All these factors will form the bedrock of the proposed framework for the end-users' stakeholders' management in PPP road project. The procedure of managing and organising the potential benefits arising from the project should be paramount to the end-users. Benefits are targeted prior to the commencement of a proposed project, with the expectation of realizing substantial benefits before the completion of the project. The direct benefits of end-users should start immediately as soon as the project is awarded whether as contract or concession, because modifications of

business create outcomes which prepare actions to realise benefits. The primary benefits of end-users in PPP road project in Nigeria are safety benefits, travel time benefits and vehicle operating benefits. Managing end-users' needs during construction works is very essential. Therefore, each construction project must provide the needs for its end-users during the entire construction period.

Stakeholders' numbers for individual construction projects have increased due to the modern procurement methods. This increment shows that stakeholders needed to be managed. Various reseachers aknowlegded the basic meaning of stakeholders as constituencies and individuals that have contributed willingly or unwillingly to the growth of a project bearing in mind the benefits and risks. The management and analyses of stakeholder's are fully discussed showing all the important technique used in identifying all major primary and secondary stakeholders who have vested interest in the project from any nooks and crannies of the world. The major significant of knowing the project stakeholders is to be able to analyse the roles of each group when it comes to benefits, implementation and prioritation of stakeholders. The involvement of stakeholders in projects improves the project outcomes and harmonizes organisation. Stakeholders are prioritized according to their power, interests and efforts using power/influence versus interest grid methods of analysis was established in this chapter. Apart from identifying and addressing the need of each group of stakeholder, the theory suggested the needs for strategies of redistributing benefits and decision making in such a way as to address needs of each stakeholder group thereby ensuring healthy and stable development of the corporation. Stakeholders were further justified with the use of stakeholder's theory advancing from origin of normative validity, descriptive accuracy and instrumental power. Instrumental and descriptive can be classified as theory of social science while normative can be seen as ethics based theory. The three aspects of stakeholders' theory are interconnected, have dissimilar significances and are mutually supportive of one another.

In realising the targeted or anticipated benefits from PPP projects, end-user stakeholders are often faced with different forms of challenges. These sets of challenges might vary from rules and regulations applied to vehicles owners; interchange; barrier and toll charges effects. Having identifying those challenges, it was then established using some approaches in engaging stakeholders through Nigeria National policy documents on PPP recognizing the steps that should be taken in order to certify the usage of private

investment where necessary in order to address the infrastructure gap and develop public facilities in a sustainable manner. This is necessary to overwhelm any flaws from the government side. After the benefits and challenges have been duely established a validated framework was adopted to justify the instance of end-user stakeholder's importance in Nigeria PPP project. This will enhance the participation of end user stakeholders as co-owners of the projects. This will also assist public support for PPP road projects and increase the involvement of private sector investment in Nigeria infrastructure. With the establishment of collaboration between private and public sectors, the methods of implementing the various findings are important. Methods involving the design, philosophies, approaches and startegies for realising the salient objectives of the thesis are necessary.

CHAPTER 4 RESEARCH METHODOLOGY

4.1 Introduction

This chapter contains the research methodology adopted to achieve the set objectives of the study. The chapter starts with a discussion of the research design and the research philosophy. The following subjects were discussed in the section that follows; Research philosophy/paradigm, Research approaches, Research strategies, Research choices, The Cases and Unit of analysis for the research. This presents the details of the philosophy and methodology adopted for the reseach.

4.2 Research design

Research design is the general frame structure of a research project. It serves as the overarching assembly that links and integrates the main fragments of the research work – including methods of assignment, sampling – in a way that will guarantee that the research questions can be answered satisfactorily (De Vaus, 2013; Trochim et al., 2015). It can also be seen as all-embracing strategy for the collection, measurement and analysis of data (Gray, 2013, p.128). This study was tailored with the design using the Saunders (2011) onion diagram (Figure 4.1). The research onion has become a popular illustrative tool in the explanation of research process by stages depicted by layers of the onion thus providing an effective progression through the design of research methodology. According to Bryman (2012) the research onion is very adaptable for almost any type of research methodology and can be used in a variety of contexts. As such, the study carried out its design starting from the outside of the onion to the inside but Table 4.2 was finally adopted as a guide for selecting choices in research designs.

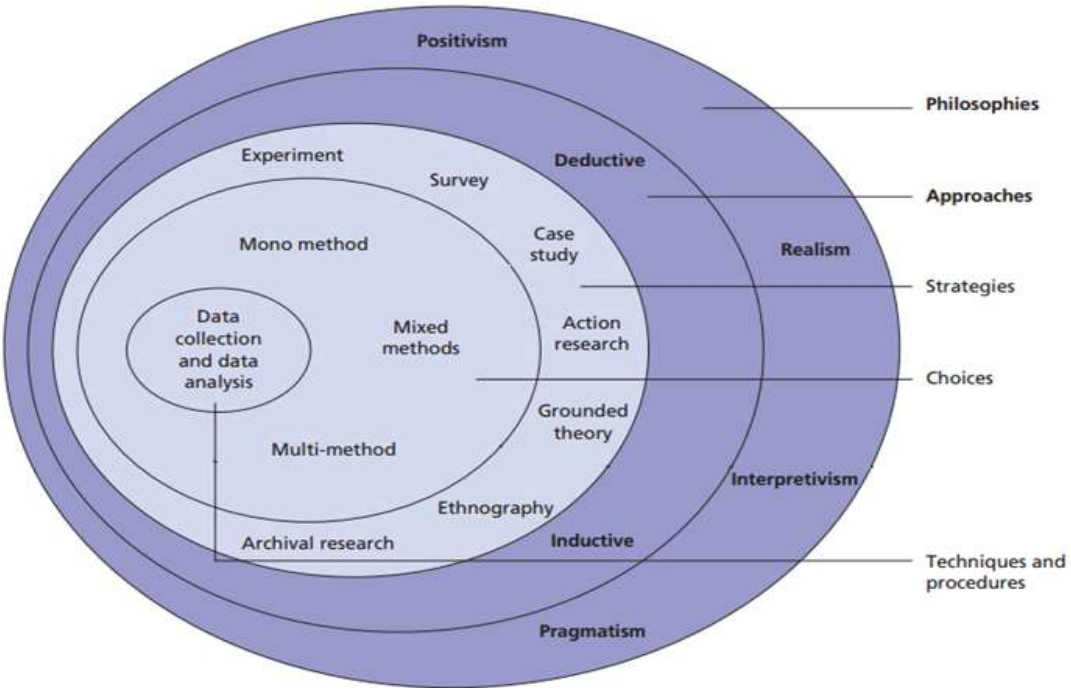

Figure 4.1: The research onion diagram

Source: Saunders (2011).

4.3 Research Philosophy/Paradigm

According to Christensen et al., (2011) philosophy and paradigm are the same as research design, which can be seen as the set of common opinions and agreement shared between researchers on how problems could be solved. Christensen et al., (2011) iterated that paradigm is defined as the underlying assumptions and intellectual structure upon which research and development in a field of inquiry is based. It is an overarching word involving the progress of knowledge and the nature of the knowledge (Gray, 2013). This includes the ontology and epistemology of the research. This implies that the underlying assumptions of a researcher are quite important in choosing a research paradigm. Nonetheless, the paradigm chosen or used for a research project must be justifiable against other options (Gray and Malins, 2016). Choices in research paradigm are important in order to justify the basic assumptions of research ethics. Table 4.1 presents a summary of the methodological positions taken in this study.

Table 4.1: Critical Choices in Research Designs

Areas of Choice	Available Choices	Choice Made
Research Philosophy	1. Positivism 2. Interpretivism 3. Critical realism 4. Pragmatism	Pragmatism
Ontology	1. Realism 2. Idealism	Realism
Epistemology	1. Objectivism 2. Subjectivism 3. Constructivism	Subjectivism and Objectivism
Research Approach	1. Deduction 2. Induction 3. Abduction 4. Retroduction	Abduction
Research Methodology	1. Mixed Method 2. Qualitative 3. Quantitative	Mixed Method
Research Strategy	1. Experiment 2. Survey research 3. Case Study 4. Action Research 5. Phenomenology 6. Grounded Theory 7. Ethnography 8. Archival Research	Multiple Case Study Strategy
Type of Case Design/Studies	1. Explanatory 2. Descriptive 3. Exploratory 4. Multiple-Case 5. Intrinsic 6. Instrumental 7. Collective	Exploratory Case Study

Areas of Choice	Available Choices	Choice Made
Data Collection Methods	1. Direct Observation 2. Interviews 3. Focus Group Discussion 4. Questionnaire survey 5. Archival analysis	Literature review Interviews and Questionnaires
Unit of Analysis	1. Individual 2. Group 3. Organisations 4. Artefacts	Individual
Reasons for Using Mixed Method	1. Triangulation 2. Facilitation 3. Complementarity 4. Generality 5. Aid Interpretation 6. Study Different Aspects 7. Solving a Puzzle	Facilitation
Data Analysis Techniques	1. Qualitative Analysis 2. Quantitative Analysis	Thematic Analysis Factor Analysis

4.3.1 Ontology

Smith and Zelaniec, (2012) described ontology as the theory of ties and their objects. It makes provisions for differentiating types of ties (dependencies, relations and prediction) and their objects (existent and nonexistence, concrete and abstract, dependent and independent, real and ideal). Blaikie and Priest, (2017) defines ontology as "the science or study of being' 'and also agrees with the nature of reality. The construction of reality, how things are and how it works (Lincoln et al., 2011) Ontology is a structure of confidence that shows an understanding of an individual about what establishes a fact (Blaikie and Priest, 2017). Ontology is connected with a dominant question of whether social objects need to be perceived as objective or subjective (Smith and Zelaniec, 2012). Therefore, realism and idealism can be identified as two significant aspects of ontology.

The word **realism** comes from the Latin expression "realists'' who is actually, really real (Brown, 2010). A philosophy that recognises that there is a real external world, which can be analysed scientifically (Saunders, 2011). Therefore, realism embraces that sense objects

and sensory perception really exists (Peterson, 2013), irrespective of the senses and the mind of human because the object can be studied by science, investigated and analysed by the nature of science discovery and philosophy. The idea of realism is that there is a reality that does not depend on human mind (Gray and Malins, 2016). This indeed is the opposite of **idealism**, which believes that reality exists only in the mind (Rusell, 2013; Moore, 2014; Broad, 2014). It is the interpretation of experience spiritually or the central role of the ideal or living under the impact.

4.3.2 Epistemology

The study of knowledge and justification of belief can be defined as epistemology (Williams et al., 2012). Otherwise, epistemology can also be termed as the study of the philosophies by which the researcher categorizes what to be look and not to be look for in knowledge (Sarens and Merendino, 2016). In research paradigm various sources of knowledge is applicable which epistemology is bothered to identify with following questions: What are the sources of knowledge? What are the essential and adequate conditions of knowledge? What are the limitations? What structure is it based on (Williams et al., 2012)? Epistemology as a justification of belief wishes to find solutions to some questions such as: What makes justified beliefs justified? How the concept of justification can be understood? Whether the justification to one's mind is internal or external? Intuitive, empirical, logical, and authoritarian knowledge's are different sources of knowledge from the epistemological perspective (Sarens and Merendino, 2016). Intuitive knowledge was established on insight, beliefs, faith and so on, in which human spirits plays an important role compared to dependence on facts. Empirical knowledge depends on the facts of the objective that have established and can be verified (Dudovskiy, 2012). Logical Knowledge is a formation of an innovative knowledge through the use of logical reasoning. Authoritarian Knowledge depends on the information obtainable from research papers, books, supreme powers and experts.

Knowledge is internally (within) built, hence it is completely subjective. It is subject to the context and should concentrate on its holistic nature (Moon and Blackman, 2014) the knower and what is known is inseparable. Human beings always have interactions with each other because they are social beings by classification. Holistically, it is paramount to

look at the variety between individuals rather than ideologies before the adoption of any social beings. Subjective experience depends on the closer movement towards an individual which cannot be occupying by any object (Fano and Macchia, 2015). Individuals are also connected together; therefore their experiences might be similar. Although, the fundamental experience will at all times remain completely subjective, the areas of similarity will be an area of shared experience which can lead to a worldwide experience (e.g. toll charges and queues experiences).

Objectivism "portrays the position that social entities exist in reality external to social actors concerned with their existence" (Saunders et al., 2012). Otherwise, objectivism is an ontological stance that emphasises on social occurrences and their meanings in reality that is independent of social players (Bryman and Bell, 2015). **Subjectivism** (also known as interpretivism) disagrees that social occurrences is created from insights and subsequent actions of those social players concerned with their experience. Officially, interpretivism can be defined as an ontological stance that emphasises on social occurrences and their meanings (Bryman and Bell, 2015) which are constantly being accomplished by social players.

4.3.3 Axiology

There is another branch of research philosophy that is not considered in this study but it is important in a research world (Axiology). All considered choices in research designs for this study were duscussed in Table 4.1. Truly axiology is a unit of philosophy that educates on judgements about values (Sauders et al., 2012). Axiology is precisely involved with the roles of researchers assessment in terms of value on all the phases of research process (Li. 2016). It is usually used to clarify an explanation or world predictions or understanding the knowledge in the reserchers context. Axiology can be discussed in the qualitative research context (Carnaghan, 2013) knowning values in the study and researcher reporting his/her values and preferences as well as the value-laden nature of results collected from the field.

4.3.4 Ontology, Epistemology and Axiology

The philosophical assumptions of this research is **realist ontology** (objective), since it clearly believes that there are certain challenges facing the end user stakeholders management irrespective of what any person's differing thoughts (Duberley et al., 2012; Saunders et al., 2012). This represents the philosophy that particular things exist independently of our thought (Mondin, 2012). Both **subjective and objective epistemologies** was applied in this study, since this work involves the interactions between human beings through interviews (subjective) in independent observation through the use of questionnaires (objective) (Mack, 2010; Mukherji and Albon, 2014; Saunders and Paul, 2013).. Considering the **axiological** stance, the researcher is not part of the responses used for the study nor influenced any aspect of it thus, it is value free. Also, the research is not completely value free as the interview section involves the researcher's inability to allow the interviewee/respondents to flow without monitoring and controlling their flow especially when responses become a digression. The focus of the thesis is on how these research approaches can be successfully used in PPP road project in Nigeria. These three different approaches of research can be used together to form a more comprehensive image of a research study taken in this study. The justification for the positions is based on the theoretical underpinning of research methodology. The research philosophies that are commonly used are given in the following sub sections.

4.3.5 Positivism

As a research paradigm, positivism sticks to the opinion that only factual knowledge gained through observation including quantity which is reliable (Seidman, 2013). There are limitations of roles in terms of data collection and interpretation through objective approach and the research outcomes are usually observable and measureable (Thiollent, 2011). In general, positivisms talk about the philosophical points that lay emphasis on observed data and scientific methods (Jakobsen, 2011). This practice embraces that the world comprises of abnormalities that these abnormalities are visible, and, therefore, the scholars decided to observe the real world through knowledge (Tolman, 2012). Positivism could be determined based on the quantifiable observations that will lead to statistical analysis which scientist viewed as a branch of knowledge from human experience (Collins, 2010). Crowther and Lancaster; (2012) ascribed to the adoption of deductive

approach from the positivist studies and relate that researcher's perspectives focuses on facts. When a positivism approach is assumed in research paradigm, researchers' belief that you are independent of the research and the research is purely objective which means minimal interaction should be maintained when carrying out research (Wilson, 2014). This means that positivist paradigm can be taken as studies established only on facts and consider the world to be objective and external (Seidman, 2013). Besides that, scholars are independent on the study hence no provisions are giving to human interests within the study of positivism paradigm which does not satisfy the objectives of this study when human interests are a significant stance of end-user stakeholders in PPP road project.

4.3.6 Interpretivism

This is also known as interpretivist who involves scholars to interpret element of the study with the integration of human interests into the study (Leitch et al., 2010). Consequently, "interpretive researchers assume that access to reality (given or socially constructed) is only through social constructions such as language, consciousness, shared meanings, and instruments" (Kroeze, 2012 p.38). The improvement of interpretivist paradigm in social science is based on the critique of positivism. Interpretivists are subjective which means viewing at something with bias and is value laden (Kroeze, 2012). Interpretivism is related with the philosophical stance of idealism, and is used to gather together various approaches, including social constructivism (Collins, 2010). It is important for the researchers as a social actor to raise the value of differences between people as one of the interpretivist approach hence focusing on the engagement of multiple methods in order to reflect different facets of the issue (Saunders, 2011). Realistic approach of data collection such as observations and interviews are the significant importance of interpretivist method (Kroeze, 2012). Interpretivist paradigm appreciates secondary data as a common tool towards the end of the research process for the emergence of significant values (Johnson et al., 2013). Law of science or nature is not connected to people's choice which does not satisfy the objectives of this thesis since science is one of the major drivers of end-user stakeholders' involvement in PPP road project. Research tends to be detailed showing culture and how people live their lives (Angell et al., 2008). Table 4.1 shows the overview of the two research paradigms.

4.3.3 Critical realism

The emergence of critical realism (CR) is from the idea of realizing a satisfactory realist paradigm of illustrative critique and of social sciences (Bhaskar, 2013), a lot of disputes arose from the criticism that humans do experience the feelings and descriptions of the real world (Novikov and Novikov; 2013). According to critical realism, the feelings and descriptions of the real world can be misleading and they usually does not portray the real world. Contrary to empirical realism (positivism) and transcendental idealism (constructivism), critical realism discusses the need for ontology (Miller and Tsang, 2011). Bhaskar debated critical realism as a social and natural science which is reinforced by ontology of natural necessity, which works in both ways at all times. Natural necessity is defined by the researcher as a necessity in nature quite free of human beings and their activity (Bhaskar, 2013, pp.10). The quest of ontology is the effort to understand and express the nature of reality. It establishes that a thing exists independent of our knowledge and understanding of those things (Sayer, 2010, p.5). Critical realist appreciate the significant of multi-level study hence increase the value of influence and interrelationship between individual, groups and organisation (Archer et al., 2013). Critical realism presumes that ontology is changing, structured and differentiated. This likewise involves a change from events to mechanism that produces events, that is the products of the events not the events themselves (Haji-Abdi, 2014). The role of mechanism, events and experiences can be described in CR realm as real, the actual and the empirical ontologies. The real specializes on identification of the fundamental mechanism that produces the experienced events which generates the causes and effect of that experience (Bhaskar, 2013).

The cause and effect of any ideology can be used to identify the germane criteria in which all-powerful relationships regarding end user stakeholders can be investigated and exposed. Usually, critical paradigm questions are; how can this inequity be corrected? Can the oppressed be assisted to understand the oppression that destabilises them? Who benefits or achieves from the current situation (Smallwood, 2015). The real involves the occurring events independent of our experience showing actual objects and events that occur.

Table 4.2: Comparison of positivism and Interpretivism

S/N	**Activity**	**Positivism**	**Interpretivism**
1	Overall attention to social research	Quantitative method is preferred which allow the researcher to remain separated from the respondents. The law that governs human behaviour is uncovered and the laws that govern the physical world are discovered by scientist which is assumed to be the point of the research. Similar methods and approaches to the natural sciences are used by sociologists	Qualitative method is preferred which allow close relationships with respondents Gaining an in-depth knowledge into the lives of respondents and understanding of their actions is assumed to be the point of the research. Non-scientific methods are used by the sociologists to see the world through the eyes of the people involved.
2	The most preferred research methods	Quantitative Social Survey Official Statistics Structured Interviews Questionnaires Validity and reliability are required by the research representativeness	Qualitative Participant Observation Personal Documents Unstructured Interviews Reliability and representativeness is sacrificed for greater validity
3	Society and the individual relationship	Overall actions of people can be described by their accustomed social norms through their gender, social class, ethnic background and socialization. Society have social impact on individual	Different people understand and experience objective reality in various ways because of their individualistic complications and reason for their actions Individuals are conscious of their external social services
4	Basic terms	Objective Scientific Detachment Correlations/ Causes Trends/ Comparison Generalizability	Subjective Humanistic Interaction/ Involvement Thick description Feelings/ Empathy Individual Motives

Source: Positivism and Interpretivsm in Social Research. ReviseSociology (2015)

The empirical specializes on both direct and indirect experiences and identified perception of knowing the subjects (Haji-Abdi, 2014). Bhaskar, (2013) described the beliefs of scientist about what they are doing, but the actual point is that development of knowledge is through experimental activity, which will lead to a successful technology. This paradigm meets the real needs of end-users stakeholders in PPP road projects in Nigeria, which can be considered for this thesis but the non-flexibility of paradigm will not influence the thesis since flexibility of end-users stakeholders is very important in PPP road project.

4.3.7 Pragmatism

Pragmatism identified that world and research can be interpreted in different ways, which no single opinion can ever provide the entire picture for multiple realities (Saunders, 2011). Because of liberality, pragmatism does not belong to any system of philosophy in research activity where both quantitative and qualitative assumptions are used (Creswell, 2014, p.11). Researchers have freedom to choose any available methods, procedures and techniques that are convenient for their needs purpose which stands as a genuine underpinning for this research. Thus, due to the flexibility of pragmatism paradigm, the methodological approach to the study would be influenced by its all-embracing pragmatism philosophy.

For the purpose of this study, Pragmatism philosophical paradigm is **adopted**. Thayer-Bacon (2010), described pragmatism as the workability, usefulness and practicality of ideas, strategies, and suggestions as criteria of their quality and claims to attention. Pragmatism is an extension of critical Empiricism in underlining the significance of actual experience over fixed ideologies and a previous reasoning in critical investigation (DeForge and Shaw, 2012). As a theoretical underpinning for mixed methods, pragmatism uses all the available approaches to understand the problems of research (Teddie and Tashakkori, 2012). Under pragmatism, the most significant determinant of a suitable paradigm is the research questions. Thus pragmatisms allow the combination of both positivist and interpretivist methods of data collection and strategy within a single study (Thayer-Bacon, 2010). As such, methods of data collection and analysis are chosen for the research questions, and thus provide an insight into the question with no philosophical

commitment to any alternative paradigm (Creswell, 2013, p.11). Since Pragmatism encourages flexibility in research design, mixed-methodology in terms of research approach and methods of data collection has become most common in most pragmatisms literatures. In this study, the mixed-methods approach to research therefore consists of both in-depth interviews and questionnaire survey to end user stakeholders of PPP road Projects in Nigeria. Since, the limitations and approaches are complementary; pragmatism is therefore considered the most suitable research paradigm for this thesis and thus enables free use of methods, procedures and techniques, which are usually connected to quantitative or qualitative research. Specification of research philosophy is very important, in which ontological, epistemological and axiological aspect of research is known. The philosophy of this study reveals the significant assumptions and these are expected to serve as a base for this approach. Usually, research philosophy has many units related to a wide range of choice. The main research paradigms in social research are further discussed accordingly.

4.4 Research Approach

Research approach is a significant component of the research design, while the research design is the master plan stipulating the methods and techniques for collecting and analysing the needed data in a research study (Mathew et al., 2014). Research approach can be classified into three: deductive, inductive and abductive. It is extremely improbable that any researcher will not be able to openly distinguish deduction and induction (Petty et al., 2012). Deduction starts with an overall view of a situation and works back to the facts (Gray, 2013, p. 16). If a researcher is looking to achieve objective(s) via testing hypothesis, the research approach is deductive i.e. the process will follow the path of theory, hypothesis, observation/testing and confirmation/rejection. Otherwise, if a researcher is trying to find answer to a particular research question(s) formulated at the beginning of the research process, then the research approach is inductive and therefore leads to generation of theory from existing data. Thus, inductive research approach relies on making sense out of fragmented data, observing patterns within data and a possible development of new hypothesis and theory (Gray, 2013, p. 16). The choice between the two is subject to a set of factors such as the area of study, research philosophy, the nature

of the research problem and others. Deduction and induction are connected research approaches (Matthew et al., 2014). It is usually beneficial to combine deduction and induction together in the same research realm (Saunders et al., 2012) in order to make the research more robust.

This study had observed and identified the most important features required for effective management of end-users stakeholders of PPP projects in Nigeria. Some earlier studies (e.g. Amadi and Tuuli, 2014; Chung et al., 2010; Eskerod and Jepsen, 2013; Freeman, 2010; Awodele et al., 2011; Mok et al., 2015; Smyth, 2008), mostly based in western countries, have observed and identified a number of factors and measures for managing every end-user stakeholders involved in PPP projects in those countries. Findings from these studies were used to form a basis as part of the questions that were used in interviewing the stakeholders of PPP road projects in Nigeria. Results from these interviews were used to develop a questionnaire, which were given to stakeholders to complete. This study therefore combined the inductive and deductive research approaches; such combination is known as abductive research (Saunders et al., 2012) which was adopted as research approach method.

However, in this study abductive approach to research was adopted. Abduction approach is dedicated to the explanation of unfinished observations, puzzles or surprising facts identified at the commencement of the study (Dudovskiy, 2012). Abduction approach starts with deduction (observing existing theory and looking for utmost explanation) and followed by induction approach to build a theory. The approach is established to look into the flaws associated with deductive and inductive approaches. Deductive approach is specifically criticized due to the lack of clearness in terms of how selected theory are tested through formulating hypotheses, likewise inductive approach is criticized because enabling theory-building will be difficult irrespective of quantity of data (Saunders et al., 2012). Abductive approach is an alternative, because it overwhelms the flaws of deductive and inductive approaches with the adoption of pragmatism as a point of reference.

The research will carry out a survey to capture the idea of the end users and stakeholders of PPP road projects in Nigeria through an inductive approach. However the observations on the operation of the PPP project arrangement and perspectives of the end users

stakeholders were examined on the PPP road projects in Nigeria, which follows deductive approach. As such, the combination of the two different approaches is considered **abdutive** approach to research, which is greatly recommended for this study (Saunders, 2011). This will enhance the rationality and reliability of the study. However, this cannot be effective alone without outstanding strategies that will justify the chosen approach.

4.5 Research Strategies

Research strategy is a methodology that assists researchers to explore the research problems. According to Saunders (2011), RS is an overall plan that assists researchers in solving research questions in an orderly manner. An active RS comprises of research questions, clear objectives, means of data collection and several restrictions that can affects the research such as time limitations, access limitations, ethical problems limitations, money and location limitations, among others (Sauders et al., 2012). An active RS assists the researcher to determine the best research policy that would be suitable and effective for the study. RS will also assist researcher in using specific data collection approaches to support the arguments (Saunders, 2011). Effective RS gathers the background information and analyses the data to a particular conclusion. The essential research strategies are discussed further in the following sections.

4.5.1 Grounded theory

Grounded theory is a strategy for developing theory that is grounded in data methodically collected, analysed/examined and investigated (Corbin Strauss, 2014). The grounded theory strategy involves what has effectively called constant comparative method or constant comparative analysis**.** This includes the researcher analysing and moving in and out the data process (Corbin and Strauss, 2014). The movement between analysis and data collection back and forth is called ***iteration*** from time to time and it can occur in multiple. The research starts with the increasing of generative question, which will assist to guide the research but are not proposed to be either confining or static (Ng et al., 2013). The core theoretical perceptions are identified immediately the researcher starts collection of data. Development of tentative linkages between the data and core theoretical perception starts

to generate at early phase of the research, which can be noticed within a month (Charmaz, 2014). There are several analytic strategies, which can be, used in theories and collection of data such coding, memoing, integrative diagrams and sessions.

4.5.2 Ethnography

Ethnography literally means to represent (or write) a culture, where the study of people, behaviour, social interactions, and perceptions that happen within groups, communities, teams and organisations (Reeves et al., 2013). The main objective of ethnography is to deliver holistic, robust insights into people ideology and actions, as well as the environment where they reside, through collection of comprehensive interviews and observations (Hammersley, 2016). Research and data collection follow the practice of diverse experiences, relationships, encounters, conversations and observations (Atkinson, 2014) which does not fully followed the approach of structured interviews. Ethnography is tremendously wide with an excessive diversity of practitioners and strategies (King-White, 2013). Although, the most commonly used ethnographic strategy is participant observation as a fragment of field research. The ethnographer is now engrossed in culture as an active participant and takes extensively minutes of field notes (Jeffrey and Troman, 2013). Ethnography study has no real ending point compared to the grounded theory that has no pre-set limiting of what to be observed.

4.5.3 Phenomenology

Phenomenology is bothered with the identification of shared experience from individual perspective, their assumptions and the ways of perceiving it (Lewis, 2015). The main objective of the phenomenological approach is to expose and identify the specific phenomena through how they are perceived by the players in that location (Creswell, 2013). Epistemologically, phenomenological approaches are established in a paradigm of individual knowledge and subjectivity, and give emphasis to the prominence of individual view and understanding (Gill, 2014). In that wise they are influential in understanding subjective knowledge, gaining visions into people's actions and motivations, and by-passing the confusion of taken-for-granted assumptions and conservative knowledge (Creswell and Poth, 2017). Phenomenological approaches are mostly effective at

conveying to the fore the perceptions and experiences of individuals from their own perspectives, and therefore at challenging normative or structural assumptions (Armstrong, 2010). The generation of ideas from research studies are robust from the data collected through the mean of induction and human benefits, as well as stakeholder perspectives may be reflected through the study.

4.5.4 Action research

Action research is a fundamental research through action (Creswell and Poth, 2017). The research is acknowledged by numerous names, including collaborative inquiry, participatory research, action learning, emancipatory research and contextual action research. An action research can also be termed as learning by doing (Peffers et al., 2012) which involves input from people who are probably affected by the research process. In other words this is a strategy in which the action researcher and an end-user cooperate in analysing a problem and eventually develop a solution based on the analysis (Bryman and Bell; 2015, p414). According to Collis and Hussey (2013, p.67) action learning adopts social world to be continuously changing, both, researcher and research being an entity of that change. Changing an environment and learning about the context of change are the rudiments of action research practice (Baskerville and Wood-Harper; 2016). The main objective of the research is to contribute both to the real worries of the people immediately when problem arises and proffer solutions to their social needs simultaneously (Rimstad et al., 2014) thus showing a dual obligation in action research to examine a situation and concomitantly cooperating with the participants of that situation in changing it, which can be regarded as a desirable direction. Achieving this dual objective necessitates the active cooperation of researcher and end-user (Schinkle et al., 2013), which pressurises the significance of co-learning as a primary characteristic of the research process.

4.5.5 Direct Observation

Direct observation can also be described as observational study and is a method of gathering valuable information in which the surveyor lookout for the subject in his/her neighbourhood without causing any problems in that neighbourhood (Siegel, 2013). It is effective when other data collection processes, such questionnaires, surveys among others

are not active or operational; when the objectives to assess an on-going performance procedure, situation or event can be seen physically (Patton, 2015). Direct observation can be obvious, when individuals and subject in the neighbourhood know the reason of the observation, or hidden, when the individuals and subject in the neighbourhood are ignorant of the reason of the observation (Daly et al., 2014). Direct observation can produce both qualitative and quantitative data such as narrative data, instructional time, and mean length of interaction and frequency counts. It is a reliable source of providing additional statistics about a specific group and can also use video to provide records (Fullerton and Ettema, 2014). Direct observation has limitations which tend not to take as long as participant observation in terms of data collection, analysis of field data and storage of field notes which cannot meet the need of end-users stakeholders' future involvement in PPP road project.

4.5.6 Experimental research

Experiments are usually the most accurate studies and have most decisive influence (Karafotias et al., 2015) they are predominantly operative in assisting hypothesis about the cause and effect interactions. A well-conducted experiment has features that govern random variables in order to ascertain that effect measured is triggered by the independent variable being influenced (Menendez et al., 2014). These features involve random assignment, use of a single or double-blind design and use of a control group (Perry et al., 2012). An experiment chooses how to influence the independent variable while assessing only the independent variable. In good experiment, dependent variable will be affected only by the independent variable (Whittemore et al., 2014). Experimental research is a method of gathering research designs using control testing and manipulation to understand casual processes (Sangster-Gormley, 2013). Usually, one or more variables are manipulated to decide their outcome on a dependent variable. Experimental research is essential to society in order to develop everyday lives.

4.5.7 Survey Research

Survey research is one of the most significant fields of measurement in quantitative and applied social research (Trochim et al., 2015). The measurement processes consist of

asking the respondents some questions. The survey is important because individuals will be asked some questions ranging from one topic(s) to other expecting feedbacks from the respondents (Jackson, 2015, p.17). A survey can be defined as anything in form of a short paper and pencil feedback form a rigorous one on one in-depth interview. The questionnaire can be in form of written document to be completed by an individual surveyed through face-to-face interview, online/mail and telephone survey. Collection of data is possible through survey for large and small populations (Hosseini, 2011). There are different types of survey, which essentially comprises of various research techniques, established by multidiscipline. Survey methods are known for two major commitments; testing hypothesis about nature of interactions within a population, and describing certain characteristics or features of population (Jackson, 2015). Survey research does not belong to any particular field (Hosseini, 2011) but rather can be embrace by all discipline willing to use the application for technological improvement.

Researchers find methods that are comfortable with their research due to some factors influenced by choice in order to use the method to explain the main reason for their justification of design strategy (Bryman, 2011). This brought the idea of using mixed method designs for any particular research that can be theoretically developed and tested by empirical observation or theoretically developed from observation of empirical reality (Saunders, 2011). It is very important to sample the opinion of end-users stakeholders on PPP road project benefits and the SPV staffs to form a comprehensive data or a subsample of people living within the community. Analysis of these data for individual leads to how end-users stakeholders can be effectively managed (Ulli-Beer et al., 2017). This method will be used in this study in order to determine the different opinion of end-user stakeholders in Nigeria toll road project.

4.5.8 Case Studies

Case studies can be found in many fields (Creswell, 2013) as a design for analysing specific problems within the confines area, position or organisation (Dudovskiy, 2012). This will make researcher develops an in-depth analysis of a case repeatedly in terms of events, program, process, activity and so on. Cases are limited to time and activity and researchers uses various methods to collect detailed information over a constant period of time (Stake, 2013; Yin, 2013). The case study simply involves observation of happenings

or reconstruction of case history (Cresswell, 2013) either group of individuals or single participant. “The case study method “explores a real-life; contemporary bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information… and reports a case description and case themes” (Creswell, 2013, p. 97). Case studies permits in-depth investigation of a research topic in detailed than expected. There are various categories of case study research methods; single, multiple, explanatory, descriptive, intrinsic, exploratory, instrumental and collective. Researchers choose suitable case studies that will reckon with the selected methods of analysed data collected during survey.

Single Case Study: This is a study used in analysing and describing the case (Creswell. 2013). The researcher can decide to create a single case study with embedded units. This is the ability to analyse the data within the case analysis itself through exploration of the case making a cross-case analysis between the analysed cases (Yin, 2013). This provides the researcher the influence to look inward at subunits that can be found in a larger case. You may enhance the analysis with graphics, tables, charts, maps and pictures (Stakes, 2013). Single study is used on a single group or single thing considering it as a choice when it comes to case study research approach. However, single case study does not give assurance to the richness of the study in detailed rather multiple case studies will provide rich theoretical insight (Creswell, 2013) of the study. With the exception of identifying the case and the exact type of a case study that shall be applied, the researcher’s needs to decides wisely whether to use a single case study, or a multiple case study will be appropriate (Yin, 2013), for better understanding of the incidence.

Multiple case studies (Chosen): When a study involves more than one single case, a multiple case study is necessary. It is widely used by scholars to analyse data both within and across each situations (Yin, 2013). The main objective is to reproduce outcomes across cases (Creswell, 2013). Since comparisons determine the outcomes, it is imperative that cases are carefully chosen so that researcher can forecast parallel results across cases (Stake, 2013) or establish theory based on conflicting results that are forecasted. This shows the usefulness in either predicting similar results in the studies or predicting contrasting results for expected reasons. This will give clarity to the valuable findings (Yin, 2013). Multiple case studies have the evidence of creating all-embracing facts that can be strongly measured and reliable. It has other advantages of creating more convincing

theory when ideas are extremely grounded in various suggestions (Stake, 2013). Therefore, multiple cases permits extensive discovery of research questions and theoretical development.

Explanatory case studies: This study is aiming to responds to how or why questions with little influence on behalf of researcher over happening of events (Stake, 2013). This category of case studies concentrate on wonders within the frameworks of real-life positions.

Intrinsic case studies: Researcher with genuine interests in the case can go ahead with this approach with the intention of better understanding of the case (Stake, 2013). Predominantly, it is not assumed because the case symbolizes other cases or because it shows a particular character or difficulty (Stake, 2013), but because the case itself is of interest due to its accuracy and normality. The purpose is not to build theory or to construct generic phenomenon, or to understand some abstract

Instrumental case studies: This approach is used to realize and understand a specific situation. With the assistance of this approach, a theory can be refined or an insight into problems can be unveiled (Yin, 2013). The case has a minor interest because it plays a supportive role, helping to understand something else. The cases may not be seen as usual with other cases because the case is frequently looking at the in depth and examine the contexts of the events in detailed (Stake, 2013), which will assist the researcher to pursue external interest

Collective case studies: Collective are similar both in description and nature (Yin, 2013) to multiple case studies.

Exploratory case studies: This study is aiming to respond to the questions of what or who in data collection methods (Yin, 2013) such as questionnaire, interviews, and experiments

Descriptive case studies: According to Yin (2013), descriptive case studies provide rich and valuable insights into a social phenomenon within a specific case. Thus, detailed description of each case is carried out in a manner that covers specific social scenes and interactions (Stake, 2013).

As the **mixed method** research choice was adopted for this study, two research strategies were needed. These were the multiple case study and survey strategies

Multiple Case Studies: Owing to the strong criticisms of a single case study having low generalizability potentials (Lapan et al., 2011; Sultan et al., 2011) multiple case studies approach was **adopted** in this study. The two cases that were used are described in subsection 4.8. According to Yin (2013) by obtaining data from different sources and cases, transferability and conformability is greatly enhanced when using multiple case study strategy. Since the study intends to explore the views of end users of PPP road projects in Nigeria, each case study adopted would therefore require in-depth analysis (Creswell, 2013). This allows investigation of phenomenon through the structures and sub-structures; in order to discover the major occurrences of social scenes and interactions along the toll roads therefore exploratory case study was also adopted for this study. The case study strategy was implemented using the interview method (qualitative).

Survey Research: The survey strategy implemented with questionnaires (quantitative). The questionnaire was informed by the result of the case study interviews (qualitative) in a facilitation model. According to Saunders et al., (2012, p.154) described facilitation method as a method of using one data collection method or research strategy to aid research using another data collection method or research strategy within a study (e.g. qualitative/quantitative providing hypotheses, aiding measurement, quantitative/qualitative participant or case selection). The questionnaire that was generated from the coding analysis was later used for wider audience reponses (see chapter 6 for comprehensive discussion)

4.6 Research Choices

Mixed methods field of research methodology is most widely accepted in the last decade, although researchers have been engaged using multiple methods, but not calling it ***mixed*** (Johnson and Gray, 2010). Mixed methods research takes benefits of using multiple means to discover a research problem (Tashakkori and Teddie, 2010). Mixed methods research is an approach for conducting research that includes collecting, integrating and analysing quantitative such as surveys, experiments and qualitative such as interviews and focus

groups research (Creswell, 2013). This strategy to research is engaged when integration gives a better knowledge of the research problem than each separately. The use of mixed methods allows the researcher to gain depth and breadth of validation and understanding, while offsetting the natural weakness of using separate research methods (Feilzer, 2010). The researcher must take into account the overall purpose of the research before considering the type mixed methods to be used (Tashakkori and Teddie, 2010) those purpose must involve the strength and weakness of each design, specific research questions and exploration or generalization. The four most commonly used mixed methods designs are briefly explained in the following subsections

4.6.1 Sequential explanatory mixed methods

Sequential explanatory mixed methods involve the quantitative data collection and analysis followed by qualitative data collection and analysis (Creswell, 2013). The quantitative data is given utmost priority, and the discoveries are integrated during the clarification phase of the study (Johnston et al., 2015). The method can be used to examine unexpected results in detail from a quantitative study (Bergman, 2011) and also to describe, construe or contextualize quantitative findings.

4.6.2 Concurrent mixed methods

Concurrent mixed methods involve the usage of only one data collection phase, during which data collection and analysis of both quantitative and qualitative approaches are conducted separately but concurrently (Östlund et al., 2011). Commonly, equal priority is given to both types of research while findings are combined during the interpretation phase of the study (Roberts and Povee, 2014). The method can be used to corroborate or cross-validate findings and to develop a more comprehensive understanding of the subject.

4.6.3 Transformative mixed methods

Transformative mixed methods involve the collection and analysis of either quantitative or qualitative data first before the outcomes are integrated in the interpretation phase

(Creswell, 2013). The research questions of the study will guide all methodological selections with the use of a theoretical perspective mirrored in the resolution (Mertens and Hesse-Biber, 2013). The method can be used to assess a theoretical perspective at different stages of analysis.

4.6.4 Sequential exploratory mixed methods (Chosen)

However, for the purpose of this study an exploratory sequential mixed method approach was engaged. As suggested by Creswell (2013), exploratory sequential mixed method involves qualitative data collection and analysis (interview) that is followed by quantitative data collection and analysis (questionnaire). The qualitative data is given utmost priority, and the discoveries are integrated during the clarification phase of the study (Johnston et al., 2015). This method can be used to develop a theory resulting from qualitative research (Harrison and Reilly, 2011). The approach can also be used to improve validity and generalizability of qualitative findings (Feilzer, 2010).

Sequential exploratory mixed method was **adopted** for this study because of its richness in theoretical development in qualitative research approach which informs the in-depth interviews (qualitative) with professional and end-user stakeholders of the chosen PPP toll roads projects in Nigeria. These elicit the subjective views of the participants along the neighbourhood of the projects. The qualitative data (using the case study strategy) was later used to formulate questionnaire surveys (quantitative) (using the survey strategy) which were later sent to the wider audiences of end-user stakeholders of the projects in Lagos Nigeria.

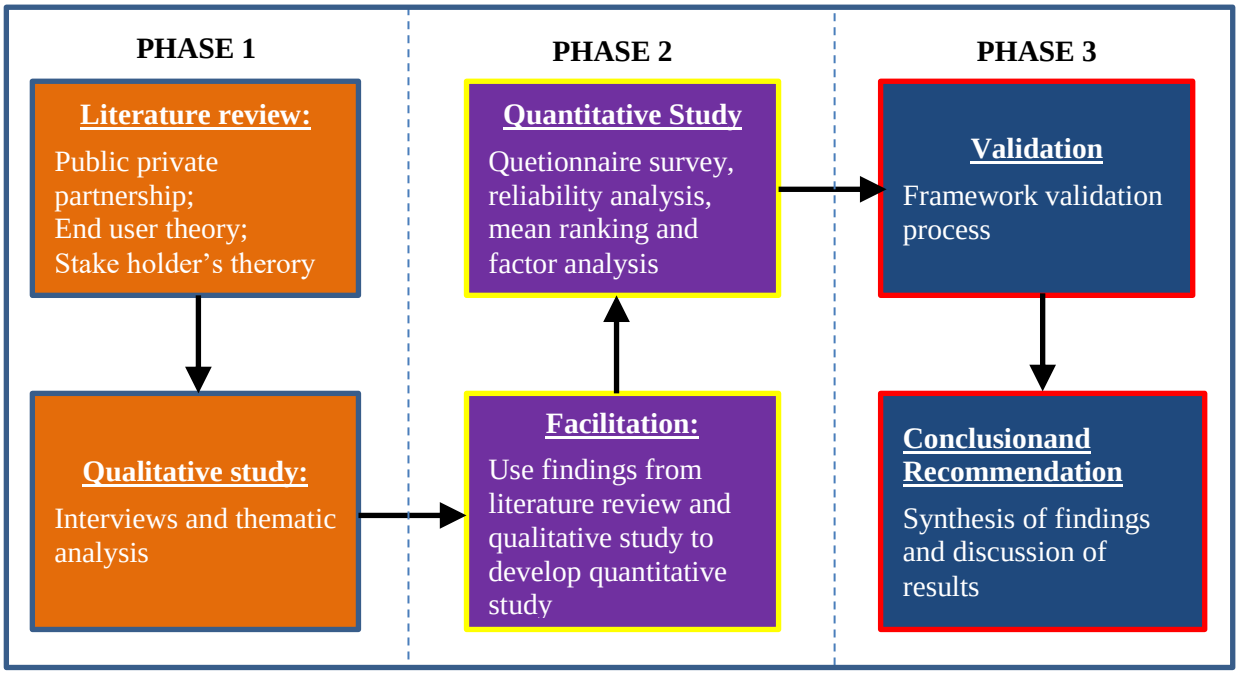

Figure 4.2: Methodological process for the study

4.7 The Cases

4.7.1 Case one: Lekki Epe Express Way

The Lekki-Epe express road was primarily constructed by past administration of Jakande, Mudashiru and Akhigbe respectively in the year 1979-1987 (Okoye and Akenbor; 2011) then the entire Lekki metropolis was unlocked for speedy development. Invariably the area started experiencing rapid and unmatched urban growth with new estates developments and new communities springing up and creating larger population for low and middle-income citizens. The previous administration realized the pressing need to address the fast growing problem of road congestion along this axis and an idea was conceived to expand the existing road into a three- lane dual carriage expressway (Dominic et al., 2015) and also construct the alternative coastal road that will pass through Ahmadu Bello way along the shores of Atlantic Ocean towards Ibeju-Lekki local Government area.

In 2008, Lagos State Government announced a contract in form of 30-year Public Private Partnership (PPP) concession between the State Government and Lekki Concession

Company (LCC). The major drive behind this concession is to deliver sustainable answers to the challenges facing heavy traffic bottleneck along the Lekki/Epe expressway road (Daily Independent, 2013, Lekki-Epe Corridor, 2009). This project was designed to guarantee the development and upgrading of 49.4km Lekki-Epe Expressway including the construction of 20km of coastal roads on the Peninsula. In addition Built- Operate-Transfer (BOT) PPP arrangement was engaged for the Lekki toll road as a type of concession to deliver the infrastructure. Lekki concession company (LCC) was a member of group of companies that partnered and corroborate with a special purpose vehicle (SPV), in order to provide vital road infrastructure and service along the Lekki-Epe expressway (see further information in subsection 2.4.2).

4.7.2 Case Two: Apakun-Muritala Muhammed Airport Road

The federal government of Nigeria recommends rehabilitation and expansion of Apakun-Muritala Muhammed airport road with the establishment of Infrastructure Concession Regulatory Commission (ICRC) Act 2005 using PPP (http://www.icrc.gov.ng/). The road is a dual carriageway of 2.8km connecting Apakun to the Muritala Muhammed Airport (MMA). The road is expected to be upgraded from four (4) to eight (8) lane carriageway capacity with 2.75m shoulders on both sides together with the construction of pedestrian bridges and vehicular at suitable locations (Adeniyi et al., 2011). The design, built, operates and transfer (DBOT) was chosen as the preferred PPP model. The expansion, design, rehabilitation and construction of the road was reconstructed in line with the Federal Ministry of Works (FMW) specification which was agreed as international standard in order to provide good riding skids for the road users along the project route.

The FMW has embarked on the toll project in order to increase the role of private sector in the maintenance, management and upgrading the infrastructure (Babatunde et al., 2016). Roughton Ltd United Kingdom was awarded the contract at sum of N38Bn with the vision of financing the project and generates their revenue through the toll collection directly from the end-user within a period of 30 years. The road has an alternative route which most of the road user prefer because of toll charges. The route is always busy because it serves various communities which necessitated public inclusion through a PPP project arrangement (Narayanaswami, 2017). This boosted commercial activities and

diversification of investment to remote areas that are presently not accessible. The road has been upgraded and tolled expecting to harness some positive impact such as increase linkage to national road network, reduce wear and tear of vehicles, (Opawole and Jagboro, 2017) reduce travel time, improved road safety and maintenance (see further information in subsection 2.4.3).

Interviews were carried out with the respondents and simultaneously recorded with the assistance of recruited staffs that were later compensated after the rigorous exercise. It was later transcribed with the use of Microsoft word (see chapter 5 for comprehensive discussion)

4.8 Unit of Analysis

One of the most important requirements of a research thesis is the unit of analysis (Trochim et al., 2015). The unit of analysis is the main object that would be analysed during the research. Particularly, research, both in social sciences and in the natural science, is a study about people or something and the 'what' or 'who' is studied could vary (Rubin and Babbie, 2013). These people or phenomenon to be studied is what is known as unit of analysis (Maxfield and Babbie, 2014). To avoid any confusion of misinterpretations of results, a research must clearly state its unit of analysis. For example; a study with 'communities' as a unit of analysis might find out that communities with higher number of immigrant experience more violence. Without considering the unit of analysis, a reader could conclude that immigrants are more violent whereas it might be case; it could just be that most immigrants are too poor to live in more secured communities (Rubin and Babbie, 2013).

Viable conclusions about a study are mainly based on the unit of analysis. As put by Grünbaum (2007, p.82), "the key issue in selecting and making decisions about appropriate unit of analysis is to decide what it is you want to be able to say something about at the end of the study". According to Blanchard et al., (2016), the social entity about which data is collected, hypothesis are designed and conclusions are made is the unit of analysis. There are different types of unit of analysis that can be used in a study. Individuals, groups, artefacts (books, newspaper, photo and so on), organisations,

geographical units (town, census tracts, state), and social interactions (divorce, court cases, traffic accidents)

- *Group*: This refers to studying social groups as against the individuals that make up the group (Rubin and Babbie, 2013). Group thus refer to cases where the unit of analysis is at least, two people (Coulthard, 2014). Examples of group unit of analysis include families, gangs, religious groups, ethnic group etc.

- *Organisations*: Social organisations are another common type of unit of analysis used for research (Trochim et al., 2015; Dolma, 2010). This could be any form of organisation from government organisations like the army, police, etc., private business organisations o not profit organisations, schools, unions etc.

- *Artefacts*: Social artefacts refer to products of social beings and their behaviour (Maxfield and Babbie, 2014). Social artefacts can also be used as units of analysis (Trochim et al., 2015). Social artefacts could be social objects like books, cars, food, furniture, or social interactions like wedding sessions, religious sermons, sport game sessions etc.

- ***Individual (Chosen)***: In this study, the unit of analysis focuses on the individual. As suggested by Rubin and Babbie (2013) and Dolma (2010), individual as a unit of analysis is the most popular type of unit of analysis. Examples include lecturers, engineers, labourers, drivers, ministers, mothers, opticians, doctors, etc. Here, individual are end user stakehoders, which include road users such as public and private drivers, passengers, residents within projects' host communities, workers, government officials among others all having direct involvement with the project were involved in this study.

Unit of observation, although usually the same as unit of analysis but not exactly the same as in all cases. Where the observed units are what conclusions are made on, then unit of analysis and unit of observation are the same. Where the observed units are neither the ones directly analysed of concluded on, then unit of analysis nor unit of observation are the different; here the unit of analysis are said to be observed indirectly (Maxfield and Babbie, 2014). In order to find out which homes are attacked more often, individuals in

home can be interviewed. Here, the individuals are the unit of observation while the homes are the unit of analysis.

The unit that was observed in this study is the end-users stakeholder of PPP road projects in Nigeria. They include private and commercial and private users of all types of vehicles, tricycles and bicycles on such roads, office workers are not left out. The unit of observation are thus the described end-users, which can be classified under individual. The unit of observation is also the same as the unit of analysis in this study. Although the unit of analysis here, i.e. the end users stakeholder, looks as if it falls under the group category, it is actually of the individual category since individuals are the end user stakeholders that are being studied as against numerous groups being studied and compared. This fact is confirmed by Rubin and Babbie (2013, p.153) who noted that researches with individuals as their unit of analysis normally refer "to the population made up of those individuals"; hence the reference to end user population in this study is recognized.

4.9 Qualitative Research Methodology

Denzin and Lincoin (2011) described qualitative research as all-encompassing of true-to-life approach to the world. The approach is predominantly explanatory which gives some fundamental details, incentives and views. It proffers vision into difficult situation and helps to improve philosophies or theories for potential quantitative research. The characteristics of qualitative data are by its fullness and richness established on the prospect of reality of subject exploration (Saunders et al., 2012). It is used to expose tendencies in opinions and thought, and plunge deeper into the root of the problem. Words are mostly the end results of the outcome from the findings instead of numbers as in quantitative research. The methods of data collection are sometimes in contrast using structured, unstructured or semi-structured techniques. The most predominantly methods used includes individual interviews, focus groups and participation/observations (Denzin and Lincoin, 2011). Respondent are carefully chosen to fulfil a given quota from the small sample size designated.

The views of the research participants/respondents becomes paramount and later gives clear directions on how various types of constraints, interactions and social behaviour will

have emotional impact on decision-making process with end-users stakeholders in terms of PPP arrangements for infrastructure developments in Nigeria (Mehndiratta et al., 2003). The interview examined people specifically to clarify 'how 'they observe events, time, and 'how' and 'why' different constraints had affected their activities before, during and after construction of toll road projects in Lagos Nigeria. Interest is not increasing on the progress of PPP both in managerial community and academic arena but the survey was conducted through an in-depth interview technique in order to investigate deeper into the cause of significant marginalization of end-users stakeholders in an economically viable project like PPP (Villalba-Romero and Liyanage; 2016) without dynamics and interactions between the government and the host communities of prescribed project locations.

In the course of the literatures that were reviewed as part of the reference point for the project, it was found that most available information on Lekki-Epe and Apakun Muritala Muhammed toll road project in Lagos Nigeria have been examined in the perspective of value for money, toll charges, traffic among others using predominantly quantitative method of approach without the consideration of qualitative aspect of it. Qualitative approach should have been involved in order to shed more light on the negligence of end-users stakeholders in PPP road project, and also to foster greater coordination and behavioural change towards the in-depth knowledge of how PPP can be used to facilitate basic infrastructure for the community at large (Morency et al., 2012). The involvement also improves the understanding of foundation problems that play an important role before, during and after the construction periods. The underlying approach of this study is to show how qualitative data can be used as a tool for robust effort on end-users stakeholders' participation in PPP toll road project, and proffer recommendations on how to improve the synergy between the government and the host communities (Green et al., 2007). Transportation and highway department of Ministry of work in Nigeria should be involved not only in PPP arrangement but also on how data's on qualitative and quantitative research should be gathered and implemented (Needham et al., 2012). The perceptions of stakeholder's exploration about PPP toll road project is quite paramount which can give an insight to unknown factors that can be used as a guide in quenching any further agitation from the host community at large in the nearest future (Ponnaluri, 2012). Government decisions concerning concession procedures are not properly followed in line with the PPP international standard regulations showing the appropriate measures of end-users stakeholders' followership and contributions to the development of the host

communities in general (Boltz and Jentsch; 2010). The basic task of governance structure is to harmonize the actions of the PPP Company and the host communities in a cordial relationship (Albers, 2010) as well as to encourage and motivate the end-users stakeholders to conform to the proposed agreement. In this study, the unstructured interviews were initially analysed to identify the desired factors affecting end-user stakeholders before the results of the interviews are facilitated with the questionnaires. It thus conforms to the sequential exploratory approach method which was adopted for this study.

4.9.1 The Data Collection Techniques

Facilitation technique was used for the research through interviews and survey questionnaire in a form of data generation for qualitative research. The qualitative studies are based on interviews with participants experimented from the professionals that have worked on the PPP toll road cited in this study battling with end-users stakeholders in an extraordinary populous city like Lagos state Nigeria. The names of the interviewee and respondents identities remain anonymous for ethical reasons. The procedure involved questions ranging from actors, projects details to routine check (Tang et al., 2010). Herein actors are PPP Project Organisation/Company i.e. project engineers, design managers, project managers, field engineers, consultant and senior manager, others are the direct end- users of PPP toll road project who have benefitted from the project i.e. members of project's host communities, commercial transports road users, office employee within project locations, private road users and other commuters (see Table 4.3)

Table 4.3: Characteristics of Unstructured Interview Participants/Respondents

Description of Interview Respondents	Case Study "Project 1" Number of Interviews	Case Study "Project 2" Number of Interviews	Total Number of Interviews Conducted	Average No of Years of using the PPP Road
PPP Project Organisation/Company				
▪ **Project Engineers**	1	0	1	5.5yrs
▪ **Design Managers**	1	0	1	6.1yrs
▪ **Project Managers**	1	1	2	6.3yrs
▪ **Field Engineers**	0	0	0	
▪ **Consultant**	1	1	2	5.5yrs
▪ **Senior Manager**	1	0	1	5yrs
Direct End-Users of PPP Toll Road Projects				
▪ **Members of Project's Host Community**	2	1	3	9.7yrs
▪ **Commercial Transport Road Users**	2	0	2	7yrs
▪ **Office Employees within Project's location**	2	0	2	6.2yrs
▪ **Private Road Users**	1	1	2	9.4yrs
▪ **Other Commuters**	1	1	2	8.7yrs
Total	**13**	**05**	**18**	

Furthermore, the description of the project in detailed regarding what the project is all about, the duration of the project, the area where the project is located, the main reason why PPP was chosen as an option for the toll road project were all considered earlier in this study. Finally, assess the success and shortcomings of the toll road projects. Ethical approval was ratified by University of Salford, School of Built Environment Ethics Committee and participants partake under informed and voluntary consent. The framework of the interview including the matter arising concerning the negligence of end-users stakeholders, the idea of PPP contract and the respondent's involvements in the sustainability of the project was also considered.

Three professionals that have worked on the PPP toll road project were considered for the pilot survey. Two of the three professionals are from Lekki-Epe project while one is from Apakun Muritala Muhammed project. I knew one out of the two professionals from Lekki-Epe location and others were recruited through snow balling sampling method

described in subsection 4.9.2. It was clearly stated that the study was a pilot one when discussing with participants. Only one question was asked about their experience on the toll road before, during and after construction. The participants were told to be free and be rest assured about the confidentiality on matter discussed. All information's are relevant as long as they are useful to subject discussed. All other questions were engendered from their responses.

The research framework was eventually implemented with a case study using Lagos – Ibadan Expressway to assess its best fit and generalisation to the management of end users stakeholders of PPP in road projects.

4.9.2 Sampling and Selection of interview participants/ respondents

To determine the participants, some certain criteria must be met in order to justify the importance for the selection and the criteria considered for these respondents are the end-users and the professionals that have inclination on the selected PPP projects. These are the people that have the background knowledge of what has happened before, during and after the emergence of the projects. Although the numbers of years considered was seven but getting respondents in terms of this condition was difficult, so minimum of five years was considered as is evident in table 4.3, not only that the technicalities of witnessing the advent of the project was also a supportive criterion in achieving desired results. For the two toll road projects chosen for this study, field facilitators were engaged from Yaba College of Technology and community-based civil service that know the inception of the projects to the end. The total numbers of eighteen (18) interviews were conducted from both Project Organisation/Company staffs and direct end-users of PPP toll road projects. Approximately 10 facilitators were trained on how to conduct and record interviews in accordance with ethical compliance standard for nine weeks. The staffs recruited were young and middle class, active and educated male and female which were compensated after the whole exercise. The recruited facilitators were paired in order to facilitate note taking and audio recording which was later transcribed and analysed. This had allowed the researcher to concentrate on interactions with the participants so as to follow the discussion to the latter. The interviews are in-depth and open-ended where respondents are inquired to describe in detailed without limitations and hindrances.

In order to identify suitable interview respondents for this study, a combination of non-probabilistic sampling approach of purposive and snow balling is adopted. The purposive sampling can also be called subjective, selective or judgement sampling method in which researcher depends on his/her individualistic findings when selecting respondents in the study (Saunders et al., 2012). Otherwise, snowballing sampling which is usually used to discover members when it is difficult from a desired population? (Saunders et al., 2012) While the purposive sampling method helped to identify information-rich participants among the experienced staff of the PPP road concessionaires (Special Purpose Vehicles), snow balling sampling approach was used to elicit qualitative findings from direct end-users of the identified PPP road projects. For the two PPP toll road projects, experienced staff with direct involvement at the project conception stage through to the completion and operational stages of the projects were carefully selected and approached. These include project engineers, design managers, projects managers, field engineers, consultants, and other project team members with minimum of 5 years of involvement with the PPP road projects see table 4.3 columns 1 and 5. However, using snow balling sampling approach, end users of the PPP road projects including members of projects' host communities, commercial transporters i.e. drivers, passengers, and other private road users (personal cars, trucks etc.) were approach for in-depth interviews see table 4.3 column 1. In the case of end users, their length of usage of the road projects have less significance to the study, as the study was open to views from both tenured road users and new ones. The total numbers of 18 interviews were conducted base on the availability of selected respondent on different days.

4.9.3 Unstructured Interview

Having considered the characteristic of all the interviews methods of qualitative data collection the unstructured interview method was adopted for this study due to its flexibility, informal, free flowing and open-ended way of asking both scheduled and unscheduled questions from the interviewee bearing in mind the subject of the matter therefore, increasing the validity of the thesis. The participants considered were averagely literate and were able to communicate in English knowing fully well the significant of the interview. Information letters were sent out earlier to each selected respondents prior to the interview dates see Appendix A. Interviews were carried out for almost nine weeks as

earlier mentioned excluding the departure dates of those letters, based on the availability of the respondents. Interview dates were separated for each case study. Case study one was conducted first before moving on to the second case study. During the first case study, 13 respondents were interviewed while 5 respondents were interviewed for the second case study respectively. This was done to ascertain in-depth knowledge and to avert any mix-up of interviewed data. Two interviews were granted thrice within the number of weeks mentioned earlier. These occurred due to the neighbourhood, in which the interviews were conducted such as respondents 5 and 6, 8 and 9, 15 and 16 respectively.

The aim of the interview is to identify the challenges each respondent encountered before, during and after PPP road construction. Other questions in the interview are about the relevant issues pertaining to the management of end-user stakeholders along the project route. Digital recorder was used to record the interviews and later transcribed for analysis. Some vital points were jotted during the interview in order to capture respondents' answer which was eventually used to develop some set of generic questions. In other words, the interview enquiry is seen as a complimentary technique used in developing a questionnaire see Appendix C. Sitting in their respective offices before I was granted an audience for the interview make the entire process tedious. The interview is a natural extra time of respondent comments which lasted between 35-45 minutes on average in respondents preferred environment and were recorded with their permission. It was later transcribed and translated verbatim in English with the use of Microsoft Word.

In as much as I intended the interview to be brief but at the same time encouraging the respondents to express their perspectives and experiences that are pertinent to the subject of the matter, some respondents spoke for more than an hour in which I have to interject because of irrelevant things that are not useful for the study while some respondents found it difficult to talk for a longer time which at the same time prompted me to interject during the interview and ask for further questions as a way of guidance. This makes some of the respondents to open-up and provide some meaningful contributions which eventually assisted the consistency and flexibility of the study.

4.9.4 Coding System and grouping

Thematic analysis was consequently implemented on all the interviews (Saunders et al. 2012) using the Nvivo software. All issues discovered during interpretation through the interview transcripts were used to create conceptual categories which was regarded as major themes. An in-depth understanding of the transcribed information provided a broad overview of shared suggestions and themes originated from the information. The Nvivo software word rate of recurrence search was also used to construct themes. As such, the information was carried out through coding skill, which certifies that only significant connotations originated from the information are considered (Braun and Clarke, 2013). Examples of coding of themes and the 'respondents' statements were taken as it was presented in Table 5.2

During the emergence of themes, the transcripts were read repetitively in relation to both previous and present constructed categories. Extra exertion was made to uphold awareness of the effect of research process on the levels obtained during the analysis and interpretation of obtained data. It was established that many components of the research process such as respondent's command of interview/story language (i.e. English language), talkative ability, social class, level of experience, among others, may have had an effect on the final output. The discoveries are thus taken to be a formation process between the researchers and the respondents, as not demonstrating a single truth, but instead as some potential stories of many possible stories. The resultant themes and sub-themes are afterwards used as variables in the questionnaire (quantitative) used in this study, as presented in Table 5.2

Three categories of basic components are used in classifying the information from the coding technique in this study. In addition to the commentaries from the respondents, the three basic components used are code/keywords, discussion/respondents and themes/measures. The identification of particular course of action idea were classified as codes/keywords, the discussion marks the respondents discussion from which idea is made while themes/measures mark out the reactions of professionals and road users that have used the facility before, during and after construction. The respondents are denoted with capital letter R. Figures 5.1 and 5.2 exhibits how some of the established course of actions themes were identified from the data. Internals which are primary source materials (for

example interview transcripts, audio recordings and survey results) were created with use of Nvivo see Figure 5.1, while nodes which represents themes, concepts, ideas or experiences emanated from the respondents during the interview see Table 5.4. Themes were created from the nodes and all themes and sub-themes generated from the analysis were used to developed questionnaire for the study see Figure 5.3

4.10 Quantitative Research Methodology

Helffer and Nier (2006) described quantitative research as the empirical systems of investigating social phenomena through statistical, computational or mathematical techniques in order to develop and engage mathematical theories, models and /or hypotheses relating to phenomena. Quantitative research can also be used to measure the problem by way of creating numerical data or data that can be converted into functional statistic (Saunders et al., 2012) vis-à-vis opinions, attitudes, behaviours and other definite variables in order to comprehensively produce results from a larger population sample. Quantitative research strategies are either experimental (issues are discussed before and after an action) or descriptive (issues are only discussed once). A descriptive study set up associations only between variables while experimental study set up causation (Qian et al., 2005). The descriptive shows the means, standard deviations and variety of scores for the variables (Creswell, 2013). The formulation of facts through measurable data makes quantitative research to uncover patterns in academic research (Karaman et al., 2008). This is done through structured data collection methods such as mobile surveys, online surveys, kiosk surveys and paper surveys (self-administered questionnaire) which was used in this thesis. The predominant purpose of a quantitative research study is to categorize features, sum total them and build statistical models in an attempt to describe any observation (Amaratunga et al., 2002). The voluntary and community sector as it is applicable in this research made it easier in evaluating and monitoring the surveys used which influenced the policy to informal conversations.

This chapter exhibited the performance, analysis and interpretation of data collected from the end-users stakeholders' of Lekki-Epe and Apakun PPP road project in Lagos State Nigeria through a designed questionnaire. The data generated from the respondents were used in arriving at the analysis such as frequency count and percentages involving tables,

bar charts, pie charts and line graphs amongst others. Similarly, in order for research data to be valuable and usable, they must be reliable in terms of measurement stability or consistency in research findings repeatedly (Sahner et al., 2012). The quantitative aspect of this study comprises of survey strategy which is fully discussed in this section. The survey strategy was executed with questionnaire data collection which was developed from the interview data (qualitative). Quantitative data analyses is a valuable instrument used for exploring relationships of variables that cannot be directly measured (complex) such as physiological scales, socioeconomic status and nutritional pattern (Rahn, 2013). To develop a strategic approach for effective use of PPP arrangement for road project in Nigeria, the responses of the questionnaire will be subjected to a rigorous statistical process

4.10.1 Pilot study for questionnaire

Subsection 4.9.2 as described the criteria that were used in selecting the respondents. Resulting themes from qualitative data (see table 5.2) were used to develop an introductory questionnaire to determine the relevancy of each identified variables in PPP road project. This introductory questionnaire was used as a pilot study with the purpose of appraising its significance/accuracy, length, layout and intricacy before it was sent out for broader set of targeted respondents. A preliminary pilot study was conducted using direct road users which are frequent users of both PPP toll roads. With 15 volunteer respondents a final study was conducted from the two toll roads, 12 from Lekki-Epe toll and 3 from Apakun Muritala Muhammed toll respectively. The variables gotten from the entire interviews with use of Nvivo were 29 (see table 5.2) which were later developed to 45 questions for the pilot process. The numbers of the questions was finally reduced from 45 to 33 as results of major feedback from the volunteer respondents see table 5.15. Recommendations of rephrasing some of the questions through the feedback so as to make them more concise were considered thereby removing the questions that are not valid. All recommendations/feedback were conscientiously executed. In the final questionnaire, respondents were specifically asked to evaluate the significance of various identified factors that can ensure better management of end-user stakeholder in Nigeria's PPP toll road projects, This was done using a five-point Likert scale rating, where 1 represented "No Effect" and 5, "Best Option". The surveys were then distributed by hand respectively.

4.10.2 Sampling and Selection of participants/respondents

The real survey for the research was conducted using sampling strategies for qualitative study (see subsection 4.9.2) which were repeated in order to get in touch with more prospective respondents. Identifying various end-user stakeholder that are directly involved in using the PPP toll road frequently was done using random sampling and a hard copy of questionnaire were given to respondents in neighbouring offices, shopping mall, palace, banks and airports within the locations of the study. Most of the questionnaire were left for the respondents to fill and collected after feedback few days later, given them ample time to do justice without prejudice. The questionnaire were distributed according to the numbers specified by the point man in each places mentioned earlier. A total number of 400 questionnaire were targeted for the respondents on both case studies, but 300 and 100 were shared between the two locations respectively. The reason behind this is that the population of Lekki-Epe toll road is appreciably higher than Apakun Muritala Muhammed toll road even aside that, there are more than 9 toll points for payment which indicated the wideness of the toll while the other toll point for payment is just only 2 (see Appendixes D and E).

Out of the entire 400 questionnaires that was distributed within the neighbourhood of the two locations, 282 were returned in total from the two locations representing approximately 70.5% return rate. This comprised 252 respondents from Lekki-Epe toll road and 30 from Apakun Muritala Muhammed respectively. The entire 282 questionnaire were usable for the analysis. The returned rate was impressing from the Lekki-Epe respondents because of their concerned effort on how they have been marginalized before, during and after construction while the responses from Apakun Muritala Muhammed respondents were disappointing because of their lackadaisical approach to salient issues affecting the road users. The variables used in the questionnaire are presented in table 5.15. Sample of the circulated questionnaire is presented in Appendix C

4.10.3 Facilitation

Facilitation method design uses one method of data collection or research approach to support research using another method of data collection or research approach within a study" (e.g. qualitative providing hypotheses, aiding measurement, quantitative participant or case selection). In order to improve the credibility and reliability of findings in this study, qualitative data from unstructured interviews and literature review, were used to inform the development of quantitative data collection method (questionnaires); this is known as facilitation (Saunders et al. 2012). According to Saunders et al. (2012, p.154), "triangulation is using a data collection method or paradigm to aid research of another within one study in order to ensure that you are getting positive response from the data", while "facilitation method design uses one method of data collection or research approach to support research using another method of data collection or research approach within a study" (e.g. qualitative providing hypotheses, aiding measurement, quantitative participant or case selection). The targeted respondents for the interviews and questionnaires were basically PPP road users and staffs of the special purpose vehicle for each PPP project (the company that constructed the road) in Lagos Nigeria. The unstructured interviews were aimed to established as many as possible factors that affected the experience of PPP road users in Lagos Nigeria since unstructured interviews do not limit respondents' response (Latham and Finnegan, 1993). The questionnaires were used to facilitate and improve generalizability/reliability of the collected data (Mathers et al., 1998). Purposive, snowballing and random sampling methods were used to identify the targeted respondents. Survey data was analysed using statistical techniques. Analyses that were carried out include Cronbach alpha reliability analysis and factor analysis for the purpose of factors reduction and factor grouping.

4.10.4 Data Analysis Tools

Survey data was analysed using statistical techniques with Statistical Packages for Social Sciences (SPSS) which have the readily available statistical tools and techniques designed for research data analysis. Frequency and percentages were used for descriptive data that were analysed to describe the responses on the data set. Analyses that were carried out include Cronbach alpha reliability analysis and factor analysis for

the purpose of factors reduction and factor grouping. The grouping through which the Factor Analysis was employed in establishing the proposed framework for the end users stakeholders' management of PPP road projects,

4.10.5 Evaluation of the Data for Validation of the Framework

The proposed framework was developed through survey and interviews from relevant data gathered for the framework for PPP road projects in Nigeria. The framework was evaluated through cross validation from a failed PPP road project as a case study. This is to validate the proposed framework.

4.11 Validity and Reliability

4.11.1 Qualitative

The most significant step towards validity was the pilot studies for the interview and this has been explained in subsections 4.9.4. After the interview, the respondents were engaged in discussion about the content of the questions asked during the interview and the feedbacks were corrected and reviewed for final question. This shows the validity of the exercise after the respondents unanimously approved the corrected introductory question inquired in the interview. According to Snowling et al., (2011), question validity is significant to the validity of research.

The coding validity was the second validation step engaged with the interview data. This was done by engaging another knowledgeable researcher, in this case my other supervisor in Nigeria to code the interview data (i.e. autonomously carried out a thematic analysis on it). The results were reasonable agreed upon after subsequent comparison of his themes/codes. This method of validation procedure remains one of the most acceptable and common practice of confirming validity/authenticity of interview data (Snowling et al., 2011; Cope, 2014; Leung, 2015). Some of the few irregularities found after the separate analysis were discarded.

Reliability refers to the repeatability of results, should in case the study is repeated twice, the same findings will be gotten. This has proven the reliability of the data. More than one preson can observe the same events as applicable in this thesis when all observers agreed on what has been recorded, therefore making the data reliable (Reliability and Validity, Retrieved 10th September, 2017 from psc.dss.ucdavis.edu/sommerb/sommerdemo/intro/validity.htm). In terms of data collection, the smaller the number of respondents, the bigger the tendency the data collected will differ from that of another researcher because each researcher might have completely stumble upon separate respondents. In principle, the higher the number of respondents, the higher the reliability of data.

It was established through comprehensive review of sample size in qualitative research by (Read, 2013) that saturation is attained in interview data long before interviewing 30 respondents. The required number of respondents for saturation had been earlier identify as 12 respondents in the qualitative research (Fush et al., 2015). The point of saturation is at which no innovations of information's is required out of subsequent interviews and does not symbolize a point at which reliability can be said to have been met. The interviews conducted for 13, 14, 15, 16, 17 and 18 respondents (all greater than 12) is to determine the level of involvement of end-user stakeholder management in Nigeria PPP road project (see table 5.2) thus increase the reliability of the interview data.

4.11.2 Quantitative

The most significant step towards validity was the pilot studies for the questionnaire as explained in subsections 4.9.4. The prepared preliminary questionnaire was given to an expert in order to check the content of the factors in the questionnaire. While the expert identified a few invalid questions in the preliminary questionnaire which was later reviewed and adopted to be valid. According to Snowling et al., (2011), question validity is significant to the validity of research.

Reliability refers to the degree at which a scale produces steady results. Reliability analysis is determined by finding the proportion of systematic difference in a scale, which can be done by deciding the relationship between the scores achieved from different organisations of the scale. Therefore, if the relationship in reliability analysis is high, the scale produces steady results and is therefore reliable (Yarnold and Soltysik, 2010). This

technique was used to determine if the variables of the questionnaire survey consistently reflect the construct it is meant to measure (Field, 2013).

Table 4.4: Research objectives and their relevant data collection techniques

S/N	Research objectives	Data Collection Techniques		
		Literature review	Case Study	
			Interview	Questionnaire
1.	To examine the evolution of PPP arrangement and identify various end-user stakeholders' perspectives.	x		
2.	To explore the potential challenges facing PPP arrangement in Nigeria	x	x	x
3.	To investigate the challenges facing end-users stakeholders of PPP road project in Nigeria and identify factors for better end-users stakeholders management	x	x	x
4.	To evaluate the end-user stakeholders needs along the project route.	x	x	x
5.	To develop and validate a framework for managing end-users stakeholders PPP arrangement in Nigeria.	x	x	x

There are several ways of measuring reliability for questionnaire survey, but one of the best ways that was used in this study is by checking the reliability of the questionnaire data to run a reliability test using Crobach's alpha analysis. Find the detailed of this process in table 5.14.

4.12 Ethical Consideration

According to Stake (2005), qualitative scholars are visitors in the private galaxies of the world. A build-up of principles and values which addresses questions of the good, bad and ugly aspect of human affairs where ethics which examines the reasons behind acting or abstaining from acting; for positive or negative conduct; for believing or disbelieving something about moral or malicious conduct (Australian Law Reform Commission, 2001)

Ethical considerations can also be addressed at group and individual levels bearing in mind the University of Salford compliance of ethic policy in order to facilitate research at the same time safeguarding the University, researchers and research topics (Ethics and research governance, 2016). The researcher maintained the dignity, safety, right and wellbeing of participants for this research study. I was opening minded with interviewees, clarifying the aim for the interview and how obtained data would be used. In this manner, an ethical consideration shows the kind of environment in which we decide to live and all kinds of rationalizations that are used in normative statements.

4.13 Chapter Summary

This chapter comprises of various research methods that adopted to achieve the set objectives of the study. This chapter fully discussed the research design and the research philosophy of the study which informs the strategy for data collection, measurement and analysis of data with the inclusion of underlying principles and intellectual structure in which the research was established. Out of the entire paradigm discussed in this thesis, pragmatism was adopted due to its flexibility and liberality on end-user stakeholders because the system does not belong to any philosophy in research activity where both qualitative and quantitative are used to developed interviews and questionnaire for end-user stakeholders respectively. The ontological assumptions of this research is a realist ontology, since it clearly believes that there are certain challenges facing the end user stakeholders management irrespective of any person's thoughts. Both subjective and objective epistemologies are used in this study because it involves communications between human beings (end-users stakeholders) through interview (qualitative) and autonomous observation through the use of questionnaire (quantitative) respectively. The combination of the deductive and inductive research approaches are considered for this study and were recognized as abductive. Sequential exploratory mixed method was adopted in this study because of its richness in theoretical improvement in qualitative research strategy which enlightens the comprehensive interviews with end-user stakeholders and the professionals that have experienced the chosen toll roads in Lagos Nigeria. This was later used to formulate the questionnaire for wider audiences. The research strategy adopted is a multiple case study strategy involving two PPP toll road projects in Lagos Nigeria, namely Lekki/Epe Toll Road Project and Apakun Murtala Mohammed PPP toll road project respectively. Findings from the case studies were

elicited through interviews (qualitative) with research respondents, from which questionnaires (quantitative) were developed for wider distribution to other end user stakeholders using offices, shopping mall, palace and habitat within the location of the projects. The unit of analysis for this study is "Individual," in other words, the end user stakeholders of PPP road projects in Nigeria are recognized as individual. This was considered appropriate since the data collected and analysed are all about toll road users (i.e. end user stakeholders). Hence it was appropriate to classify the unit of analysis in the study under individual category. An adopted table that summarised the entire choices of methods and research objectives used in this study are fully epitomized.

The study adopts pragmatism, which combines qualitative (interview) and quantitative (questionnaire) methods into a multiple study. Accordingly, an exploratory sequential mixed method was adopted, which starts with qualitative data collection/analysis and the results are then used to drive the quantitative study. Thereafter, the methods adopted for both qualitative and quantitative data collection and analyses were presented in the subsequent chapters. Thematic and factor analysis were used to identify important groups and variables contributing to end-user stakeholders' marginalisation (see chapters 5 subsection 5.2 and 5.6) respectively. This chapter established the research philosophy of this study as pragmatism with an abductive research approach. The mixed methods approach was adopted and unstructured interview and questionnaire were used as research strategies (see chapters 4 subsection 4.9.3 and 4.9.4) respectively. The case study approach was also adopted. The interview and survey strategies were used to execute and facilitate the case study approach, using Nvivo and SPSS in analysing the collected data (see chapters 5, figure 5.1, 5.2, 5.3 and table 5.15) respectively. These will improve validity and reliability of the study.

CHAPTER 5 DATA ANALYSIS

5.1 Introduction

Based on the responses collected via interview and questionnaires this chapter presents the research data and inform the statistical analysis of the data which gives the skills and in-depth knowledge related to qualitative and quantitative data collection processes (Driessnack and Furukawa, 2012). The principle of qualitative research is established on the understanding that people have different opinions that could have an outcome of multiple realities due to diverse in experience and understanding (Atkinson, 2014). In that wise, the use of qualitative approach for this exploratory study guarantees the pre-eminence of data and emic opinions (respondents' meaning), which is capable of improving the wider acceptability of any proposed strategy. Respondents can also be selected through appropriate methods (Malinovskiy et al., 2010). Questionnaire surveys were developed through observed conducted interviews. Participants can also be regarded as respondents in this chapter.

5.2 Qualitative Data Analyses

In order to make sure that the detailed data was analysed, the written statement was transcribed from the recorded digital voice, which was read a number of times in order to identify themes that originated from the deliberations. While doing this, thematic analysis was engaged to identify both implicit and explicit declarations that originated from the transcribed data (Braun and Clarke, 2013). In this study, themes are identified as measures that could be put in place to strengthen the end-user stakeholders' complaints on marginalization in their respective needs. The transcribed data were subjected to thematic analysis to extract analytical and descriptive themes which is flexible and easily available instrument for analysing unstructured qualitative data (Braun and Clarke; 2013). Qualitative methodologies are extremely diverse and multifaceted (Holloway and Todres; 2003) and thematic analysis should be acknowledge as the initial technique for qualitative analysis. The analysis understands numerous features of the research theme (Boyatzis; 1998). Researchers should see and acquire thematic as the first qualitative method which

provides fundamental skill that can be suitable for conducting various forms of qualitative analysis. The analysis is pragmatic in nature which informs the meaning, understandings and the authenticity of the participants, in which the observation of behaviours in terms of skills, actions, significance and realities denotes the interpretation of the happenings in the society. Thus, thematic analysis can be described as a method which mechanised the reflection of reality and unknot or untie the superficial of reality, Issues raised by the respondents in terms of conflicts of interest on the PPP toll roads are explored and a thematic analysis was carried out with the aid of Nvivo software (Green et al., 2007). Non-experimental, exploratory and unstructured qualitative primary data segments were considered.

The interviewed transcripts were identified, analysed and transcribed into themes using thematic analysis. A word frequency analysis of all transcribed interviews was carried out with Nvivo software. All words that related to a potential factor in the word frequency query search was noted and coded. Each factor was categorised under a major category according to literature. The analysis was able to show the frequency at which each factor was mentioned, the context in which it was mentioned among others.

Table 5.1: Coding Data Showing Challenges Facing End-Users Stakeholders of PPP Road Project in Nigeria

Codes	**Respondents**	**Comments(from the data, highlighted by the code)**	**Measures/Themes (established from the comment)**
Alternative Route	R11	"In as much I don't like traffic with all the risk it carries, why not provide alternative route or some kind of relieve to the masses that are grumbling under severe hardship due to unnecessary traffic congestion caused by the toll gate".	Provision of alternative route during construction to ease traffic
	R15	"The main reason why a lot of motorists are using this toll road is because of the traffic they might be facing from all alternative routes to the airport, this toll has many alternative routes that is more than five without stress but the only problems with those routes are bad roads".	
	R10	"We planned for so many things including animal crossing structure, pedestrian bridges, bus stops	Installation of speed

Codes	Respondents	Comments(from the data, highlighted by the code)	Measures/Themes (established from the comment)
	R1	among others even the alternative road, which did not exist before, was constructed to have a 90 degree angle and there is no road alignment along the route in terms of safety" "it would provide an alternative route which will be good and accessible but not as freer as the tolling one"	limiting devices on both main and alternative routes
Community Leaders	R13	"There is indeed a well-structured standing committee in place at the moment which membership includes that of Oniru Chieftancy Family, Eti-Osa Heritage Group, Coalition of Oodua self-determination Group (COSEG) – representing Civil-Society organisations and Eti-Osa Leaders of Thought, with the chairmen of three local Governments Areas (Eti-Osa LGA, Eti-Osa East LCDA and Iru/V Island LCDA), among others"	Involvement of Community leaders in key decisions
	R17	"Well they might have settled some community leaders in the estate including the air force people, who know. All the necessary facilities that the road user supposed to be enjoying are not provided, common bus stops are not available, and the public transports just stops anywhere the passengers requested to stop"	
Compensation	R12	"Land is the major source of income of this community that is why you can feel all the agitation because of compensation palaver. Not that we did not do any compensation for the affected stakeholders but there are lots of discrepancies in terms of payment, we are still in court presently to ascertain the rightful owner of the affected part of road during construction".	Compensations to affected building and adjacent areas such as lands, shops, petrol stations among others
	R9	"People really suffered, they lost their properties, and some loses their jobs not to talk of landed property. The agonies still linger in the memories	

Codes	Respondents	Comments(from the data, highlighted by the code)	Measures/Themes (established from the comment)
		of some indigene and even some of the people that has landed properties along the road".	
	R12	"Issue of compensation is difficult to settle because it involves families and these families are not united when money is mentioned. After all said and done, some members of the affected family still groan with hanger telling us we are partisan in taking decision on compensating their family"	Royalties for indigenes (compensation)
Cost of Living	R3	"We lack good schools, health care centres and hospitals, good roads and other basic infrastructure. In spite of all these I have mentioned, government and the concessionaire added more to our burden by asking us to pay tolls. LCC will always be saying that alternative routes would be provided around each of the toll plazas, how many plaza are we expecting abi they want kill us with toll"	Make efforts to stop increase cost of living and provide basic infrastructure
	R11	"People are suffering to pay house rent because of the problems the government caused when they are destroying peoples shanties along the road because of this project during construction"	
	R14	"On the accusation that home builders and landowners are being charged heavily on land use charges and personal income tax because of the PPP that happened between the government and the company is not true, because taxes are applied generally to all citizens irrespective of whether they use a service or not while toll is a form of tariff, and it is applicable to only people that use the particular service"	

Codes	Respondents	Comments(from the data, highlighted by the code)	Measures/Themes (established from the comment)
Securty	R10	You see the services we rendered within the little time we are in charge and is still the best because if they have any vehicle breakdown or other difficulties on the road, they would be assisted by our rescue team irrespective of the fact that they have not paid the toll, is that not security and safety.	Contractor should contribute to the improvement of security in the host community as construction works lead to security risk
	R14	We have little or no challenge about the success of the project because this road was bounded both left and right mostly by the Nigeria military air force and you what that means in terms of security and safety.	
	R8	When people were forcibly evicted from their homes and places of businesses, over alleged security and environmental concerns where do you want them to get job to feed their families	
Travel Time	R10	"Initially the road was two lanes each on either side of the road. In spite of the level of publicity about the project, an additional one lane was added on each side of the road to make it six lanes as against the initial four lanes as justification for improvement"	Travel time during and after construction
	R12	"There are several ways that can be used to tackle the traffic problem known as travel time; one of the better solutions for me is the possibility of an isolated super multi-lane carriageway just like the Autobahn in Germany where no speed limit exists".	
	R17	"Could you believe the road distance is so short that the management can provide all necessary infrastructures along this road? I don't know how to describe the distance but is not more than 10 minutes' drive maximum if there is no traffic even with traffic it cannot take you more than 45	

Codes	Respondents	Comments(from the data, highlighted by the code)	Measures/Themes (established from the comment)
		minutes that is why am telling you that I don't know why they cannot give this road utmost priority in providing the best facilities even with the huge amount of money they are generating."	
Safety	R5	"See in this community can you believe we don't have a sport centre, this government don't have sense that is why thief's plenty on the road when you are driving at night, most especially in the traffic robber will asked you to wind down your motor glass and collect your phone and jewelleries and run away. No security with all the money they are collecting from our people, even the street light is on and off our safety is not guaranteed at night along the road. Their security patrol will come when the robbers don vamoose."	Increase restriction efforts on roads during and after construction so as to increase safety
	R6	"Am always annoyed when the company in charge of this road is telling us why they fenced some of the communities along the road off because it affected my boss house, you know what I heard, the reason for fencing the highway is borne out of safety concerns. What a stupid idea does that mean the main reason for erecting the fence is primarily to address safety concerns as it claims, but there are other ways to go about it – for instance they may perhaps create a concrete barrier that is a few feet high – as in the case with bridges? With this kind of structure, instances of stray animals and vehicles roaming into the highway from adjacent areas along the road would be checked".	

Codes	Respondents	Comments(from the data, highlighted by the code)	Measures/Themes (established from the comment)
Drainage and Flooding	R15	This area is worse during raining season with flood everywhere because of the drainage path that was not completed during construction.	Improving local flooding and drainage works
	R6	The government should provide enough recreation centres with the toll money and give the host community sense of belonging always, look at what of recent during these massive flooding it took the state government over 24hours to respond to peoples call after their properties have been destroyed by water due to heavy downpour.	
	R7	I think the government should do all the needful to provide more facilities most especially in the area of flooding that almost destroy their properties. The government can do that by clearing the entire drainage path along the road and create more drainage channels that can accommodate excessive water when we have heavy rain.	
Crossing Strctures	R13	In spite of the huge amount of money involved in the concession of the Lekki-Epe Expressway, in recent times the road has seen its portion of deaths; an issue that has become a source of concern to residents of the area. Between the first toll plaza and the second, there are three pedestrian bridges but beyond the second bridge close to Chevron, there are no other bridges.	Making provisions for crossing structures (Pedestrian bridges)
	R7	What I can say to rap everything up is that the state government should try and listen to the yearning of the masses by providing them all necessary infrastructural facilities like the pedestrian bridges, sport centres, habitable bus stops, zebra crossings for school children even though we have made provisions for all these things in our agreement but the impatience stakeholders scuttled everything	

Codes	Respondents	Comments(from the data, highlighted by the code)	Measures/Themes (established from the comment)
		saying one ex-governor owns the company that implemented the project	
Job Creation	R10	Issue of job is another story, is it possible to give a job of construction to a lay person that does not have the technicalities? The answer is capital no but the indigene are complaining of not giving them jobs during construction as if we don't want to comply with their fathers. This is the honest truth the state government even at a stage compel us to call all the royal fathers in the community and asked them if they have anybody that has the experience of what we are doing on site but no instead they are requesting for royalties because they royal fathers.	
	R11	Yes the good road brought a lot of development, job opportunities and social life because there is a cinema inside the shopping mall that I am working. You don't need to go to anywhere before you get anything you are looking for but it might be a little bit expensive but is better than going outside this area when a lot of people prefer to come and do their shopping here in Lekki. It is not possible to have everything but at least these roads elevate the economics of this area and increase the standard of living of the masses.	Creating jobs for the Residents
	R5	You see in 2013 when I heard that the company are looking for young graduate that will work has cash officer at the toll gate. I went there by myself with my uncle as an important chief in this area. I had the entire necessary requirement for the post they are looking for and I did interview when I was shortlisted, you know why am telling you all these things for you to know that residents at times are not fools they know what they are doing. Any way after the interview I was expecting the useless	

Codes	Respondents	Comments(from the data, highlighted by the code)	Measures/Themes (established from the comment)
		company to offer me the job not only on merit but also as an indigene of Eti-Osa, I was shocked to hear that the people that were shortlisted are more than the vacancy that was advertised for, Okay I was fortunate to know one of their gate man who happens to be an indigene as well, that man now told me that they decided to give the people from outside the community job because of fear of seriousness.	
Involvement of Residents	R13	I was told that the sitting governor that initiated this project requested for stakeholder forum not before the project but during the project because of some problems that erupted. Some selected stakeholders in the axis attended a meeting with the Governor on the way forward on how some issues that were raised by the community could be resolved. At the meeting, I was told more than 20 Obas and Chiefs in the area attended including the commissioner of Police in Lagos, officials of LCC and government officials, were all in attendance where issues were resolved that a committee be inaugurated to settle the issue that is bothering the masses on infrastructural facilities on the expressway.	
	R3	It has happened several times even in 2011 when the aggrieved Lekki residents under the auspices of Lekki-Etiosa-Epe Estates Indigenes and Stakeholders Association (LEEEISA) stage a	Involvement of Residents in key

Codes	Respondents	Comments(from the data, highlighted by the code)	Measures/Themes (established from the comment)
		peaceful protest that turned gory at the Admiralty Circle Toll Plaza on the ever-busy Etiosa-Lekki-Epe expressway exactly 24 hours to the commencement of tolls collection on the road. The protest had started out peacefully until thugs allegedly sponsored by the government in the state and carrying banners that read: "NURTW Supports Tolling," showed up with machetes and started attacking protesters.	decisions
	R12	let me quickly round up with by saying PPP is a fantastic idea by the government but the awareness on PPP is very; very; very low and what I think the government should do about that is to carry along all the stakeholders when they are about to start any project that involves community like this Lekki-Epe axis.	
	R15	Initially they did not get the residents involved in all the project arrangement capitalising on the military power, thinking that if any stakeholders complain of anything they will be dealt with. But the issue boomerang later when the community stakeholder teamed up with air force and confronted the airport authority of mismanaging the money realised from tolling.	

Codes	Respondents	Comments(from the data, highlighted by the code)	Measures/Themes (established from the comment)
Royal Fathers	R10	This is the honest truth the state government even at a stage compel us to call all the royal fathers in the community and asked them if they have anybody that has the experience of what we are doing on site but no instead they are requesting for royalties because they royal fathers. Most of these things are not for public consumption but people refused to understand should we be telling them that the royal fathers they called their leaders are after their selfish interests	Involvement of Royal Fathers in Key decisions
	R5	They did not follow up the consultation promise after the fake visit that was done before; even our environment suffered a lot of damages during construction	
	RI	We had so many challenges from the royal fathers	
Speed limit device	R16	Road user are not afraid to pass through this road but the only problems is the road surface and high speed breakers and I don't even know why the air force officials are not complaining may be they have collected bribe from them who knows	Installation of Speed limiting devices on alternative routes during construction
	R13	There is no speed limit that can caution the drivers even the one that was provided is not bold enough to see. Some commercial bus drivers too always complained about the frequency of accident that occurred on this road. This road has become a place noted for recording dead bodies of accident victims regularly	
	R2	Please my brother don't listen to all their lies they will be telling you ooo even common speed limit they did not provide allowing vehicle to be running as if they are doing race competition	

Codes	Respondents	Comments(from the data, highlighted by the code)	Measures/Themes (established from the comment)
Involving Private Firm	R13	Our agitation continued until recently when the non- indigenes of Eti-Osa and residents of various estates along this axis including, Lekki Phase I; Femi Okunnu estate Lekki; Victoria Garden City (VGC), Abraham Adesanya, Corporative Villa Estate, Goshen estate, and even up to, as well as business owners in the community, joined our struggle in order to be able to speak with one voice. In the area of stakeholder's relations is worse form the inception but recently the State Government has continued to engage and consult stakeholders in the community because of the past mistakes that have committed by the past government. Even the past government tried but not in the proper direction because wrong set of people were consulted on behalf of the community stakeholders.	Involvement of Private Firms within the community in key decisions
	R18	The road is connected to many business offices that have to do with the frequent passage of the road daily	

Codes	Respondents	Comments(from the data, highlighted by the code)	Measures/Themes (established from the comment)
Involving Market Women	R10	We have some key people like the market women leader who did a yeoman's job when the crisis is tense, but the truth of the matter is the public lacked awareness of what is called PPP	Involvement of Women Leader in key decisions
	R12	let me quickly round up with by saying PPP is a fantastic idea by the government but the awareness on PPP is very; very; very low and what I think the government should do about that is to carry along all the stakeholders including market women when they are about to start any project that involves community like this Lekki-Epe axis.	
Physical Effects	R3	The ones that we had before, they destroyed them hoping they are going to replace them with better ones. Look at the ways they demolished the buildings, petrol stations, offices, kiosk and even people doing some menial jobs like vulcanizer, battery charger, engine oil seller and so on along the road were laid off making their daily income difficult.	Choice of Routes for Physical Effects (Demolition of Buildings)
	R11	It is easy among the elite to be praising government for pulling down illegal structures along the road but what about the families, elderly and children affected during this demolition. Is it because they are poor or they are illiterate, everybody is important in his or her own little way. If the government cannot cater for the people that were affected by the development of the community then their safety is not guaranteed	
	R8	The government should either replace back the houses, shops petrol station and all other stuff of	

Codes	Respondents	Comments(from the data, highlighted by the code)	Measures/Themes (established from the comment)
		the affected residents or compensate them with equivalent of their loss so that they can move forward with their business	
Special Crossing	R7 R9	What I can say to rap everything up is that the state government should try and listen to the yearning of the masses by providing them all necessary infrastructural facilities like the pedestrian bridges, sport centres, habitable bus stops, zebra crossings for school children even though we have made provisions for all these things in our agreement but the impatience stakeholders scuttled everything saying one ex-governor owns the company that implemented the project. A lot of people are complaining about accident been frequent on this road, why will accident not happen, all the zebra crossing that supposed to done are not there, not to talk of pedestrian bridge, I can see that they've started some construction of pedestrian bridges but do they need to tell them before all these things are put in place	Create Special Crossing for School Children

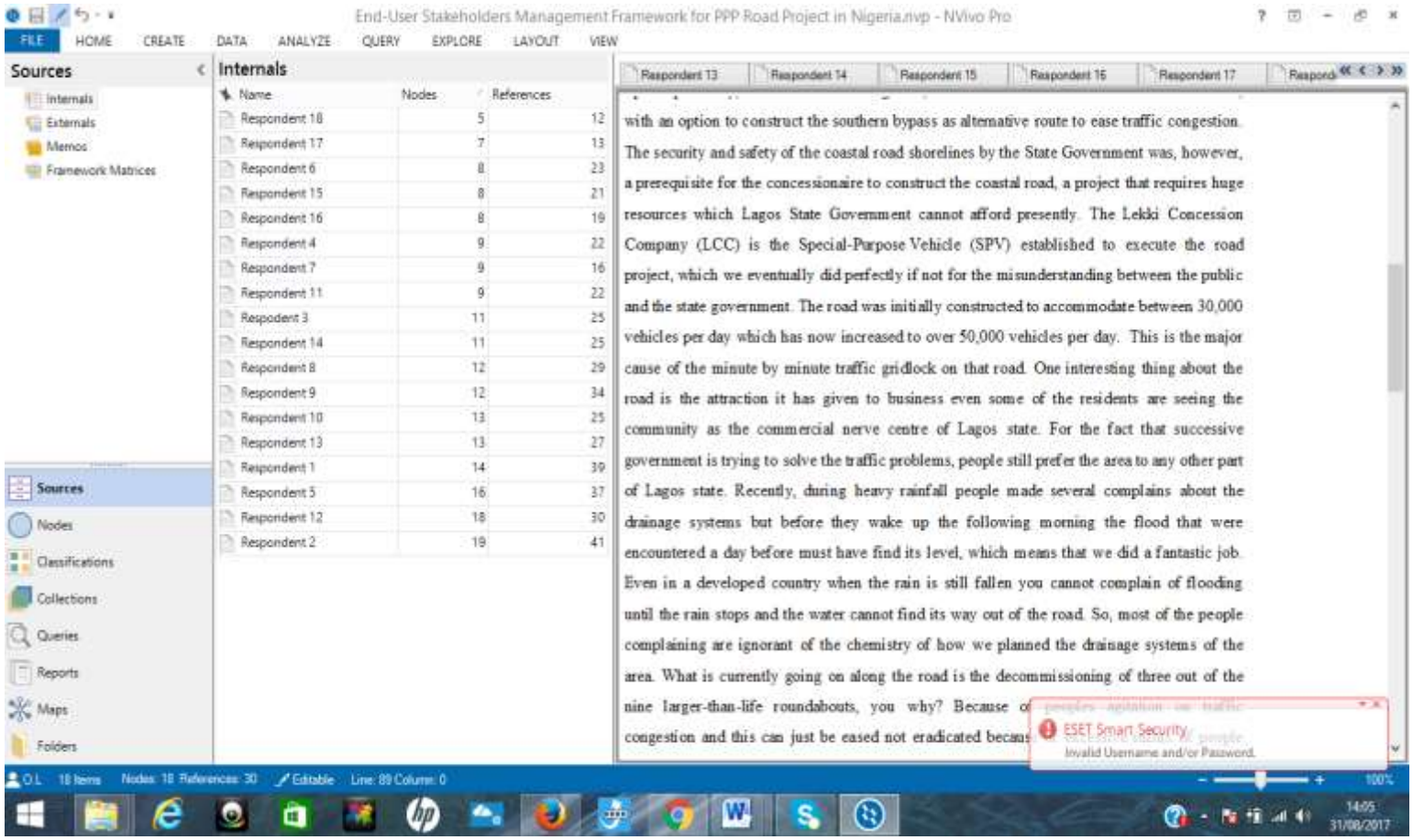

Figure 5.1: Coding system for respondents

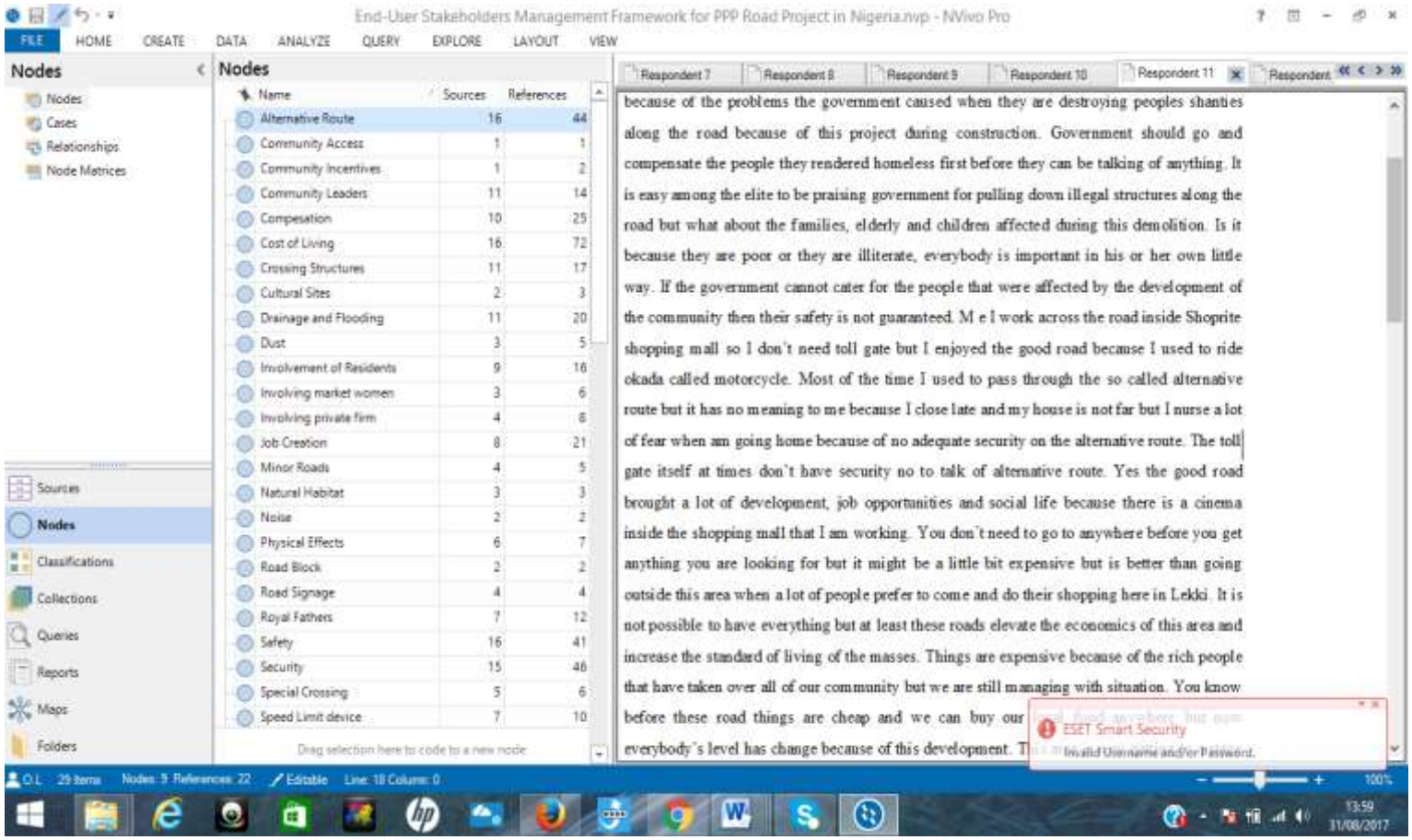

Figure 5.2: Coding system and grouping

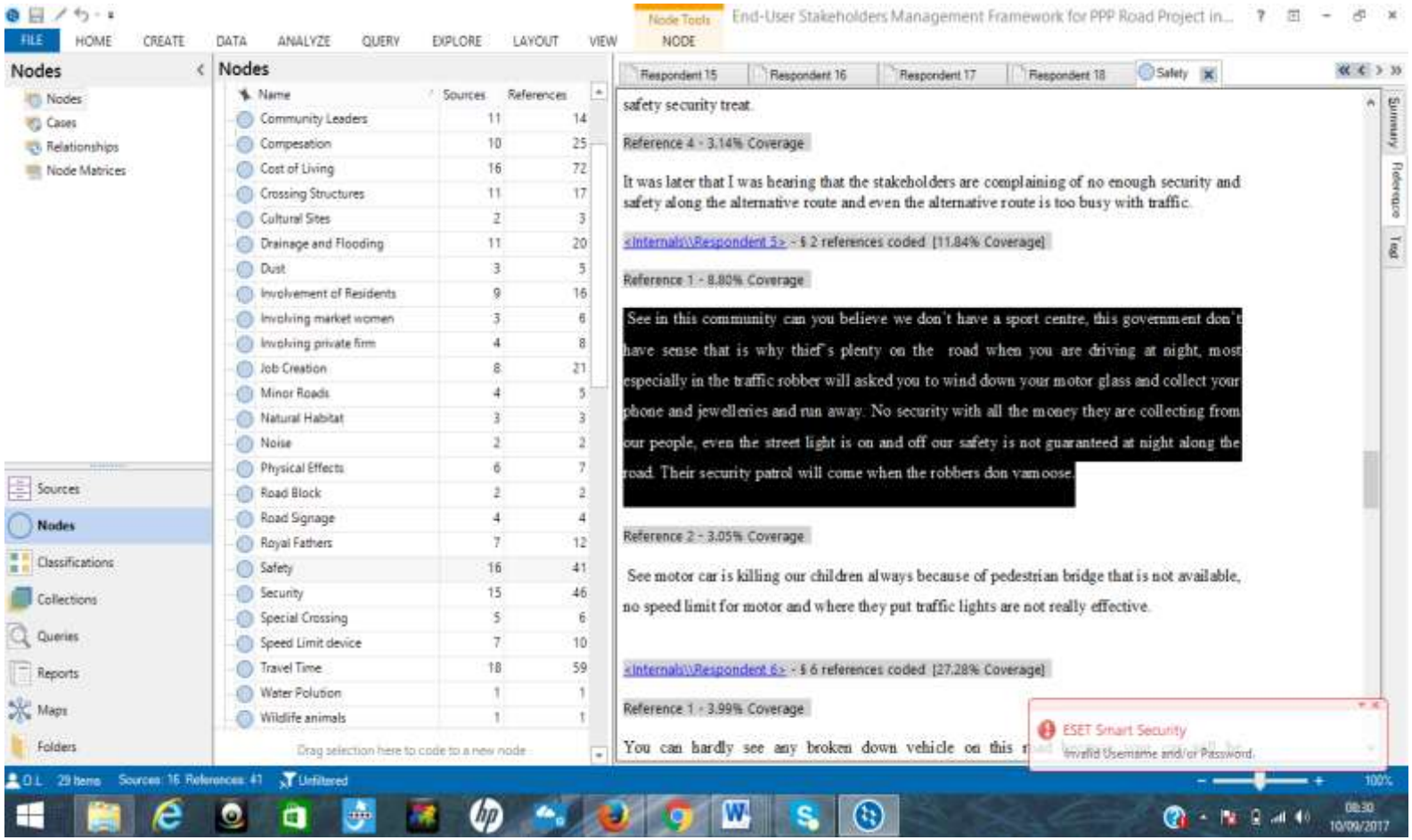

Figure 5.3: Nodes representing tools and other area of interests

5.3 Outcomes from Nvivo Analysis of the Interview

NVivo as a software does not prescribe a method, but supports a wide range of methodological approaches and assist a researcher in undertaking an analysis of qualitative data. It organizes and manages the qualitative data, providing answer to a system in the research question and develops image of the whole study for improved understanding. The analytic stage of this project involved the initial identification of nodes and the running of queries. This is the process of exploring with initial nodes being moved, merged and renamed into 29 nodes of Alternative Route, Community Leaders, Compensation, Cost of Living, Securty, Travel Time, Safety, Drainage and Flooding, Crossing Strctures, ,Job Creation, Involvement of Residents, Royal Fathers, Speed limit device, Involving Private Firm, Involving Market Women, Physical Effects, Special Crossing, Community Access, Community Incentives, Cultural Site, Noise, Dust, Natural Habitat, Physical Effects, Minor Roads, Road Signage and Road Block some of which are listed in the screen shot in Figures 5.2 and 5.3. As a result these transcripts were loaded as a node to allow their content to be incorporated as a questionnaire for quantitative data analysis.

Nodes were then give new name and merged into an arrangement that is ranked in order to allow greater analytical coding. Unlike quantitative data which is numeric in nature and the meaning of the numbers is not attached to the numbers but the patterns arising from analyzing the numbers statistically, the meaning of each qualitative data is multidimensional. Researcher has to read and re-read each line of text to understand the meaning that influences each line before coding at the appropriate nodes or deciding the themes suitable for the text. As shown in Figure 5.3, all the stakeholders emphasised Travelling Time as the most important factor and the most referenced. The Majority of the respondents gave credence to top four themes which include Cost of Living, Alternative Route, Safety, and Security through the interview as captured in Figures 5.2 and 5.3.

In a nutshell, the assessment of managing End-Users Stakeholders Participation in PPP Project in this study had broadened the understanding of analyzing qualitative data using the NVivo software among local researchers. Indeed, the procurement of qualitative data had supported the quantitative inputs of this study; hence, strengthened the overall findings of the study.

5.4 Quantitative Data Analyses

This chapter exhibited the performance, analysis and interpretation of data collected from the end-users stakeholders' of Lekki-Epe and Apakun PPP road project in Lagos State Nigeria through a designed questionnaire. The data generated from the respondents were used in arriving at the analysis such as frequency count and percentages involving tables, bar charts, pie charts and line graphs amongst others. Similarly, in order for research data to be valuable and usable, they must be reliable in terms of measurement stability or consistency in research findings repeatedly (Sahner et al., 2012). The quantitative aspect of this study comprises of survey strategy which is fully discussed in this section. The survey strategy was executed with questionnaire data collection which was developed from the interview data (qualitative). Quantitative data analyses is a valuable instrument used for exploring relationships of variables that cannot be directly measured (complex) such as physiological scales, socioeconomic status and nutritional pattern (Rahn, 2013). To develop a strategic approach for effective use of PPP arrangement for road project in Nigeria, the responses of the questionnaire will be subjected to a rigorous statistical process.

5.5 Data Analysis and Presentations of Results For End Users Stakeholders Management Framework For PPP Road Projects

A presentation and analysis of results for discussion are given in this section. The moderating variables were described for the purpose of the research which was subsequently followed by the results and analysis of the research objectives.

Age of Respondents

A total number of 282 useable responses were established across the three ages of respondent's groupings as seen in Table 5.2.

Table 5.2: Age of the respondents

Age	Frequency	Percentage
18-29yrs	123	43.6
30-49yrs	138	48.9
50-64yrs	21	7.4
Total	282	100.0

The biggest groupings of respondents that participated in the study were the 30-49yrs (48.9%), while the 18-29yrs (43.6%) and 50-64yrs (7.4%) participated respectively. This implies that majority of the respondents are within their active youthful age.

Gender of Respondents

A total number of 282 useable responses were established across the two genders of respondent's assemblages as seen in Table 5.3.

Table 5.3: Gender of the respondents

Gender	Frequency	Percentage
Male	149	52.8
Female	133	47.2
Total	282	100.0

The highest number of gender of respondents that participated in the study is predominantly male with 52.8% compared to 47.2% for female respondents. This indicates that the distribution of the population of respondents is relatively balanced although with more men being slightly involved which is understandable.

Occupation of Respondents

A total number of 282 useable responses were established transversely on the occupation of the respondent's as shown in Table 5.4.

Table 5.4: Occupation of the respondents

Occupation	Frequency	Percentage
Students	32	11.3
Public servant	12	4.3
Field workers	19	6.7
Office workers	186	66.0
Drivers	2	0.7
Others	31	11.0
Total	282	100.0

The data showing highest number of respondents that participated in the study are mostly office workers with 66% while others that participated in the study have varying numbers of respondents with students having 11.3%, others 11%, field workers 6.7%, public servants 4.7% and drivers 0.7% respectively. This indicated that office workers actively took part in the survey based on their level of understanding.

Education Respondents

The level of education for 282 useable responses were determined across the data collected as indicated in Table 5.5.

Table 5.5: Level of education of the respondents

Level of Education	Frequency	Percentage
Primary School	3	1.1
Secondary School Certificate	25	8.9
Polytechnic	49	17.4
University	205	72.7
Total	282	100.0

The majority of the respondents that participated in the study are largely university degree holders with 72% while others that participated in the study have varying numbers of respondents with polytechnic degree holders having 17.4%, secondary school certificate 8.9% and primary school certificate 1.1% respectively. This has shown that university respondents actively participated

Resident of Respondents

The locations of the inhabitant of 282 useable responses were sampled from the data collected as specified in Table 5.7.

Table 5.6: Residence of respondents

Resident of Respondents	Frequency	Percentage
Island	26	9.2
Lekki	51	18.1
Ajah	56	19.9
Epe	3	1.1
Mainland	141	50.0
Other	5	1.8
Total	282	100.0

The majority of the respondents reside in Lagos Mainland territory having a highest number of 50%, Ajah 19.9%, Lekki 18.1%, Lagos Island 9.2%, other 1.8% and Epe 1.1% respectively. This indicates that respondents living outside the project location are significantly higher than the community based respondents.

Trip Purpose of Respondents

The usual trips of 282 useable responses were observed from the data collected as shown in Table 5.8.

Table 5.7: Usual trip purpose by the respondents

Usual Trip Purpose	Frequency	Percentage
Office	143	50.7
Business	59	20.9
Employment	34	12.1
Resident	14	5.0
Shopping	14	5.0
Recreation	18	6.4
Total	282	100.0

The most frequently made journey according to the respondent's feedback is the office trip with 50.7%, while others such as business 20.9%, employment 12.1%, and

recreation 6.4%, resident and shopping share the same number of 5% each respectively. This indicates that respondents working in the project arena are significantly higher than others which depict level of corporate engagement.

Level of Road Usage by Respondents

The disparities amongst the 282 useable responses were established across the respondents as shown in Table 5.9 which indicates that 100% of the respondents had used the roads in *the research case study.*

Table 5.8: Usage of the roads by respondents

Level of Usage	Frequency	Percentage
Yes	282	100
No	0	0.0
Total	282	100.0

The feedback from the data collected indicated that all of the respondents have used the toll road before with an admirable 100%. This indicates that the respondents that have been using the project route for any reason irrespective of their residence or place of work.

Frequency of movement by Respondents

The frequency of movement either through vehicular or pedestrian from 282 useable responses were acknowledged through the respondent's reaction in Table 5.10.

Table 5.9: Respondents' frequency of road usage

Frequency of Movement	Frequency	Percentage
Daily	130	46.1
Trice in a week	28	9.9
Once in a week	42	14.9
Monthly	24	8.5
Rarely	58	20.6
Total	282	100

The highest recorded respondents that participated in the study favoured daily passer-by with 46.1% while others like rarely passer-by 20.6%, once in a week passer-by 14.9%, trice in a week 9.9% and monthly 8.5% respectively. This indicates that respondents' of daily passer-by are significantly higher than other road users.

Mode of Transportation

The mode of transportation is an integral organ of movement of people from one place to another, 282 useable responses were observed across the participated respondents as shown in table 5.11.

Table 5.10: Respondents mode of transportation

Mode of Transportation	Frequency	Percentage
Car	161	57.1
Bus	41	14.5
Public transport	78	27.7
Motor bike	1	0.4
Others	1	0.4
Total	282	100.0

The most used mode of transportation in the study is the car with 57.1%, while the likes of public transport 27.7%, bus 14.5%. Motor bike and others shared 0.4% respectively. This indicates that respondents using car has a mode of transportation are significantly higher compared to other modes.

Safety of Respondents

A total numbers of 282 useable respondents decided on the comfortability and safety of the toll road during vehicular movement as shown in Table 5.12.

Table 5.11: Respondents comfort with the road in terms of safety

Safety	Frequency	Percentage	
Extremely safe	37	13.1	13.1
Quite safe	148	52.5	52.5
Somewhat safe	53	18.8	18.8
Neither safe or unsafe	34	12.1	12.1
Not safe	10	3.5	3.5
Total	282	100	100.0

The reactions of respondents that participated in the study agreed that the road is quite safe with 52.1% while other respondents feel otherwise with different opinion with 18.8% for somewhat safe, 13.1% extremely safe, 12.1% neither safe or unsafe and 3.5% for not safe. This indicates the level of safety at which respondent's travels to their various destinations.

Traffic Situation

The assessment of 282 useable respondents participated in deciding the traffic situation along the toll road as shown in Table 5.13.

Table 5.12: Respondents perception of traffic situation on the toll road

Assesment of Traffic	Frequency	Valid per cent
Excellent	7	2.5
Very good	12	4.3
Good	63	22.3
Fair	113	40.1

Poor	87	30.9
Total	282	100.0

The majority of the respondents rated the condition of the traffic as fair with 40%, while some respondents rated the traffic condition as poor with 30%, good 22.3%, very good 4.3% and excellent 2.5% respectively. This indicates that the situation of traffic is not encouraging most especially during the peak period.

5.6 Statistical Analysis for Evaluating the End-User Stakeholders Needs along the Project Route

The analysis of data for evaluating the end users and stakeholders needs requires grouping the numeroue factors identified from literature and expert opinion were presented and analysed for the purpose of achieving objectives of the research. Before the presentation and analysis of results, the data set were assessed for their reliability for the required statistical tests by checking the cronbach alpha of the data set and also a test KMO and Bartlett tests for appropriateness of using Factor analysis

By the recommendation of numerous social scientists (Field, 2009; George and Mallery, 2003; Nunnally and Bernstein, 1994; Spector, 1992; among others),Cronbach's alpha coefficient is used in this study to test and examine the reliability of the questionnaire data. Mathematically, Cronbach's alpha is written as

$$\alpha = \frac{N^2 \overline{COV}}{\sum S^2_{criteria} + \sum COV_{criteria}}.$$

The main objective of the test was to checked the regularity of the obtained data in order to found if the variables and their associated Likert scale are really assessing the hypothesis they were envisioned to measure (Field 2009). The hypothesis, in this case, is the title given to each numbers of variables as related to the management of end-users stakeholders in Lekki- Epe toll road. The coefficient of Cronbach's alpha value ranges

from 0 to 1 and as a thumb rule, 0.9 and above represent high consistency, but 0.8 was described as a sign of good internal consistency (reliability) while 0.7 is recommended as the lowest acceptable score (George and Mallery 2003). Table 6.3 presents the Cronbach's alpha coefficient test results gotten from SPSS. The reliability test was run and the overall Cronbach's alpha coefficient gotten for serial numbers 1-33 variables were more than 0.8 (see details in Table 5.15), portraying good internal consistency of the data. This has shown their usefullness for this research

To check if all the variables are contributing to the internal consistency of the data, the 'Cronbach's alpha if item deleted', positioned in column three of Table 5.15 is further examined. A variable that is not contributing to the overall reliability from the sets of variables will generally have a higher correlated 'Cronbach's alpha if item deleted' value than the data's overall Cronbach's alpha coefficient (Field 2009). This higher value portrays that if the variable with the value is deleted, the overall reliability of the data will increase (Field 2009). In this context, all the variables in serial number 3, 10, 13, 21, and 28 respectively that are boldly written in italics with peach colour in the table below contributed positively to these groups of reliability (see table 5.14)

Table 5.13: Reliability test for identified factors for better end-users stakeholders' management of PPP Road Project

S/N	Variables	Cronbach's alpha if item deleted
	Overall Cronbach alpha = 0.882	
1.	Creating jobs for residents	0.879
2.	Improving local flooding and drainage works	0.880
3.	***Royalties for indigenes (compensation)***	***0.885***
4.	Repair of local minor roads leading to important places like market, beaches and other recreational areas	0.877
5.	Giving incentives to local residents during road work	0.879
6.	Putting proper road work signage in place to increase safety	0.874
7.	Avoiding the damage of (or replacing damaged) natural habitats like water ponds, mangroves, forest etc.	0.882
8.	Installation of speed limiting devices on both main and alternative routes	0.874

S/N	Variables	Cronbach's alpha if item deleted
9.	Making provisions for crossing structures	0.879
10.	***Compensation of electricity for removal of electric poles and overhead cables***	***0.886***
11.	Create special crossings for school children	0.874
12.	Make effort to reduce cement and other types of dust so as to avoid inhalation by members of the host community	0.876
13.	***Avoiding displacement and killing of wildlife and endangered speeches***	***0.883***
14.	Avoiding local water pollution	0.882
15.	Increase restriction efforts on roads during and after construction so as to increase safety	0.874
16.	Noise level and air pollution	0.877
17.	Providing water wells for communities whose water supply are disrupted due to construction works	0.878
18.	Involvement of Community leaders in key decisions	0.879
19.	The choice of route for the road in terms of minimal physical effect (e.g. demolition of buildings) on local properties and businesses	0.879
20.	Involvement of Residents in key decisions	0.879
21.	***Reduction of impact to cultural sites***	***0.883***
22.	Involvement of Religious leaders in key decisions	0.878
23.	Provision of alternative route during construction to ease traffic	0.877
24.	Reduction of disruption of community access	0.876
25.	Involvement of private firms within the community in key decisions	0.878
26.	Make efforts to stop increase in cost of living and provide basic infrastructure	0.876
27.	Involvement of Youth leaders in key decisions	0.877
28.	***Contractor should contribute to the improvement of security in the host community as construction works lead to security risk***	***0.885***
29.	Consideration of the community for timings of road blocks created in order to carry out construction works	0.875
30.	Involvement of Royal fathers in key decisions	0.880
31.	Compensations to affected building and adjacent areas such as lands, shops, petrol stations among others	0.878
32.	Involvement of Women leaders in key decisions	0.880
33.	Travel time during and after construction	0.877

5.7 Factor Analysis for End-Users Stakeholders Needs Along Project Route

The SPSS software was used in carrying out an exploratory factor analysis. Series of factor extraction analysis ranging from the 'maximum likelihood', 'principal component', 'generalised least squares' and 'principal axis factoring' methods were firstly used in sequence to extract the factors in an attempt to choose the precise number of factors to be extracted. All methods resulted in a total number of 9 factors. Factor analysis was run to use a minimum Eigenvalue of 1 to select underlying factor but the computation using 'maximum likelihood' did not converge at the possible maximum number of iterations for SPSS which is 9999. This was as SPSS attempted to extract 9 factors (see table 5.15).

Table 5.14: Factor Matrix

Factor Matrix[a]
a. Attempted to extract 9 factors. In iteration 9999, no local minimum was found. Extraction was terminated.

Finally, the precise factor extraction that converged was the 'principal component' method and 'direct oblimin' oblique rotations which were used as methods of factor extraction and rotation respectively. Having noticed that rotation did not converge with the default 25 iterations setting during the initial extractions, a value of 50 was entered for 'maximum iterations for convergence' in the rotation dialogue box. Kaiser-Meyer-Olkin (KMO) and Bartlett tests of sphericity measure of sampling competency were conducted to check the suitability of the data for factor analysis. The proposed rule by Kaiser (1960), established that the number of factors to rotate is the eigenvalues-greater-than-one. This shows that there are numerous reliable factors that have eigenvalues greater than one. The rationale behind it is that eigenvalue less than one indicates that the scores on the component would have negative reliability (Cliff 1988). The standard has been established to be based on abuse of the internal consistency reliability formula which depends on the eigenvalue and the reliability of the individual measures. The scree plot and the initial application of four different extraction methods were used to decide that 9 factors were to be extracted. A value of 9 was thus entered in the number of 'factors to extract:' box for the analysis.

The result of the analysis generated values of 0.793 (above 0.5) and 0.0003649747 (less than 0.05) as shown in table 6.15 which were gotten for KMO and Bartlett tests of sphericity respectively, signifying that the data set is appropriate for factor analysis and the sampling is satisfactory (Pallant 2013). According to Pallant (2013), the closer the KMO value to one, the more the appropriate the use of factor analysis. Table 5.16 presents the details of the total variance of the 9 extracted factors.

Table 5.15: KMO and Barlett's

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.793
Bartlett's Test of Sphericity	Approx. Chi-Square	0.0003649747

Although, the 'Eigenvalue greater than one' have many reliable factors (Cliff 1988), this shows that any eigenvalue less than one would have negative reliability. The Eigenvalues (5^{th} column) of all the extracted factors were greater than one. The extracted factors represented 62.581% of total variance (see the base of 6th column) as presented in Table 5.17; this depicts a good percentage of representation. As against the percentage of variance (6th column), the varimax rotated solution (8th column) produced values that portray a more evenly representation of the data by the extracted factors after redistribution, thereby giving more credence to the variance of the factors.

Table 5.16: Total Variance Explained for factor analysis

Total Variance Explained							
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	7.762	23.521	23.521	7.762	23.521	23.521	5.312
2	2.921	8.850	32.371	2.921	8.850	32.371	5.119
3	1.879	5.694	38.066	1.879	5.694	38.066	3.683
4	1.787	5.415	43.481	1.787	5.415	43.481	1.589
5	1.457	4.414	47.895	1.457	4.414	47.895	2.007

6	1.335	4.046	51.940	1.335	4.046	51.940	1.474
7	1.281	3.881	55.821	1.281	3.881	55.821	1.794
8	1.181	3.579	59.401	1.181	3.579	59.401	3.064
9	1.050	3.181	62.581	1.050	3.181	62.581	1.477
					62.581		

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Table 5.18 was produced from the pattern matrix table in the SPSS factor analysis result, which was eventually used to select variables representing each extracted factor. Selecting variables representing an extracted factor (i.e. factor grouping), questionnaire variables with a factor loading of +0.3 and above or -0.3 and below were considered as part of the offspring of their principal factor (Child 2006). No questionnaire variable in this analysis had a factor loading outside this range as evident in Table 5.19. The questionnaire variables were arranged under each extracted factors offspring in the order of priority as shown in Table 5.19 based on the factor loading value, the variable with the dominant factor loading value showing in the first row of each extracted factor. This arrangement does not concern the (positive or negative) sign of the factor loading value.

Alhough, only variables of similar sign can be, and were, taken as offspring/representing whichever extracted factor. In that case, variables contributing to that factor were taken from offspring variables with the most common symbol under a particular extracted factor. For example, the offspring variables of 1st Extracted Factor are S/N 6, 8, 9, 11, 12 and 15 in that order (see Table 5.18). On the other hand, there are seven offspring of the second extracted factor, which are all negative factor loading values. All non-contributory offspring variables are described in *italics* font in Table 5.19. In addition, any questionnaire variable that loaded considerably on more than one extracted factor was totally exempted i.e. not considered as part of any of the two or more extracted factors (Tabachnick and Fidell 2007). This is the case with S/N 27 in peach colour which loaded significantly on the seventh and eighth extracted factors. This questionnaire variable (i.e. S/N 27 in peach colour) is thus given in italics font and underlined at the same time in Table 5.18.

Each extracted factor will be used in the development process of end-users stakeholders' management for PPP toll roads. Each variable has been assigned with a name based on the contributing constituent/offspring questionnaire variables (see column six of Table 5.18). Single name are not commonly used for all the contributing offspring questionnaire variables because of their representation, a double-barreled name is used with the conjunction 'and'. An example of this is the 3rd Extracted Factor which is named 'benefit Realisation and community participation'. In this case, some offspring represent benefit Realisation while others represent community participation. There are also a few instances where one of the offspring variables was not represented despite the use of a double barrelled name. Again, an example of this is the 7th extracted factor where the variable ('Integration with the host community') does not fit the double-barreled extracted factor name compared to 'benefit Realisation and community participation'. In such cases, nothing was done.

Table 5.17: The extracted factors from factor analysis for end-users stakeholders needs along project route

S/N	Questionnaire variables used in the factor analysis	Factor Loading	% of variance	Eigenvalue	Factor assigned name
	Offspring variables of 1st Extracted Factor				
6	Putting proper road work signage in place to increase safety	0.808	23.521	7.762	Safety efforts by the contractor
8	Installation of speed limiting devices on both main and alternative routes during construction	0.730			
9	Making provisions for crossing structures	0.446			
11	Create special crossings for school children	0.574			
12	Make effort to reduce cement and other types of dust so as to avoid inhalation by members of the host community	0.562			

S/N	Questionnaire variables used in the factor analysis	Factor Loading	% of variance	Eigenvalue	Factor assigned name
15	Increase restriction efforts to construction site so as to increase safety	0.656			
	Offspring variables of 2nd Extracted Factor				
19	The choice of route for the road in terms of minimal physical effect (e.g. demolition of buildings) on local properties and businesses	-0.535	8.850	2.921	Socio-economic impact
23	Provision of alternative route during construction to ease traffic	-0.748			
24	Reduction of disruption of community access	-0.575			
26	Make efforts to stop increase in cost of living and provide for basic infrastructure.	-0.743			
29	Consideration of the community for timings of road blocks created in order to carry out construction works	-0.622			
31	Compensations to affected building and adjacent areas such as lands, shops, petrol stations and	-0.539			
33	Travel time during and after construction	-0.723			
	Offspring variables of 3rd Extracted Factor				
1	Creating jobs for residents	0.675	5.694	1.879	benefit Realisation and community participation
2	Improving local flooding and drainage works	0.709			
3	*Royalties for indigenes (compensation)*	*0.494*			
4	Repair of local minor roads leading to important places like market, beaches and other recreational areas	0.722			
5	Giving incentives to local residents during road work	0.651			
	Offspring variables of 4th Extracted Factor				

S/N	Questionnaire variables used in the factor analysis	Factor Loading	% of variance	Eigenvalue	Factor assigned name
21	*Reduction of impact to cultural sites*	*0.674*	5.415	1.787	*Impact to cultural sites*
	Offspring variables of 5th Extracted Factor				
7	Avoiding the damage of (or replacing damaged) natural habitats like water ponds, mangroves, forest etc.	0.863	4.414	1.457	environmental impact
13	*Avoiding displacement and killing of wildlife and endangered speeches*	*0.446*			
14	Avoiding local water pollution	0.378			
16	Noise level and air pollution	0.308			
	Offspring variables of 6th Extracted Factor				
10	*Compensation of electricity for removal of electric poles and overhead cables*	0.781	4.046	1.335	Public utilities compensation
17	Providing water wells for communities whose water supply are disrupted due to construction works	0.398			
	Offspring variables of 7th Extracted Factor				
18	Involvement of Community leaders in key decisions	0.513	3.881	1.281	Integration with the host community
20	Involvement of Residents in key decisions	0.550			
25	Involvement of private firms within the community in key decisions	0.377			
27	*Involvement of Youth leaders in key decisions*	*0.343*			
	Offspring variables of 8th Extracted Factor				
30	Involvement of Royal fathers in key decisions	0.577	3.579	1.181	Integration with political groups
32	Involvement of Women leaders in key decisions	0.766			
22	Involvement of Religious leaders in key decisions	0.365			

S/N	Questionnaire variables used in the factor analysis	Factor Loading	% of variance	Eigenvalue	Factor assigned name
27	*Involvement of Youth leaders in key decisions*	*0.427*			
	Offspring variables of 9th Extracted Factor				
28	*Contractor should contribute to the improvement of security in the host community as construction works lead to security risk*	*0.861*	3.181	1.050	*Security*

5.8 Framework for Managing End-Users Stakeholders Participation in PPP arrangement Program

Based on several issues that were raised previously, it is clear that a theoretical framework is needed as a guide for any institution willing to operate PPP toll road project, to consider the significant need of end-users stakeholders' collaboration for significant success of the infrastructure. The end-users stakeholders' apprehensions concerning the promotion or participating in PPP is inevitable. Hence, this study derived a framework from a viewpoint of the life cycle of both Lekki-Epe and Apakun Muritala Muhammed toll road projects (from inception to operation stages) as discussed in previous chapters. This framework demonstrates the vigorous process that should be taken in engaging end-users stakeholders during any form of PPP arrangement most especially toll roads project. Also, one of the target responsibilities of the framework is to achieve equilibrium of interests amongst different parties involved and at the long run become conscious of introducing toll charges for all partners along the project neighbourhood including the interests of the host community. It was previously observed from 9 extracted factors from the principal component method of factor extraction; hence 7 factors were eventually used for the design of the final framework as a tool in engaging end-users stakeholders' marginalization along the prescribed PPP toll road projecst. The main reason why this was done is that there are non-contributory offspring from the extracted factors table (offspring variables 4 and 9 extracted factors) which gave birth to the final 7 (seven) extracted factors outcomes which eventually formed a fundamental basis for end-users stakeholders framework. The framework is designed to give end-users stakeholders assured intensities of influence on any form of PPP arrangement. Henceforth, end-users stakeholders'

engagement under any form of PPP will now become an essential focus in incorporating their values, concerns and needs into any corporate and governmental process in decision-making. Significant improvements will be perceived if the developed framework below is adopted for end-users stakeholders' management ideas after validation from PPP experts who have engage themselves in such projects, which can later be used to integrate the governments, private investors and host community over the PPP development process (see subsection 6.11)

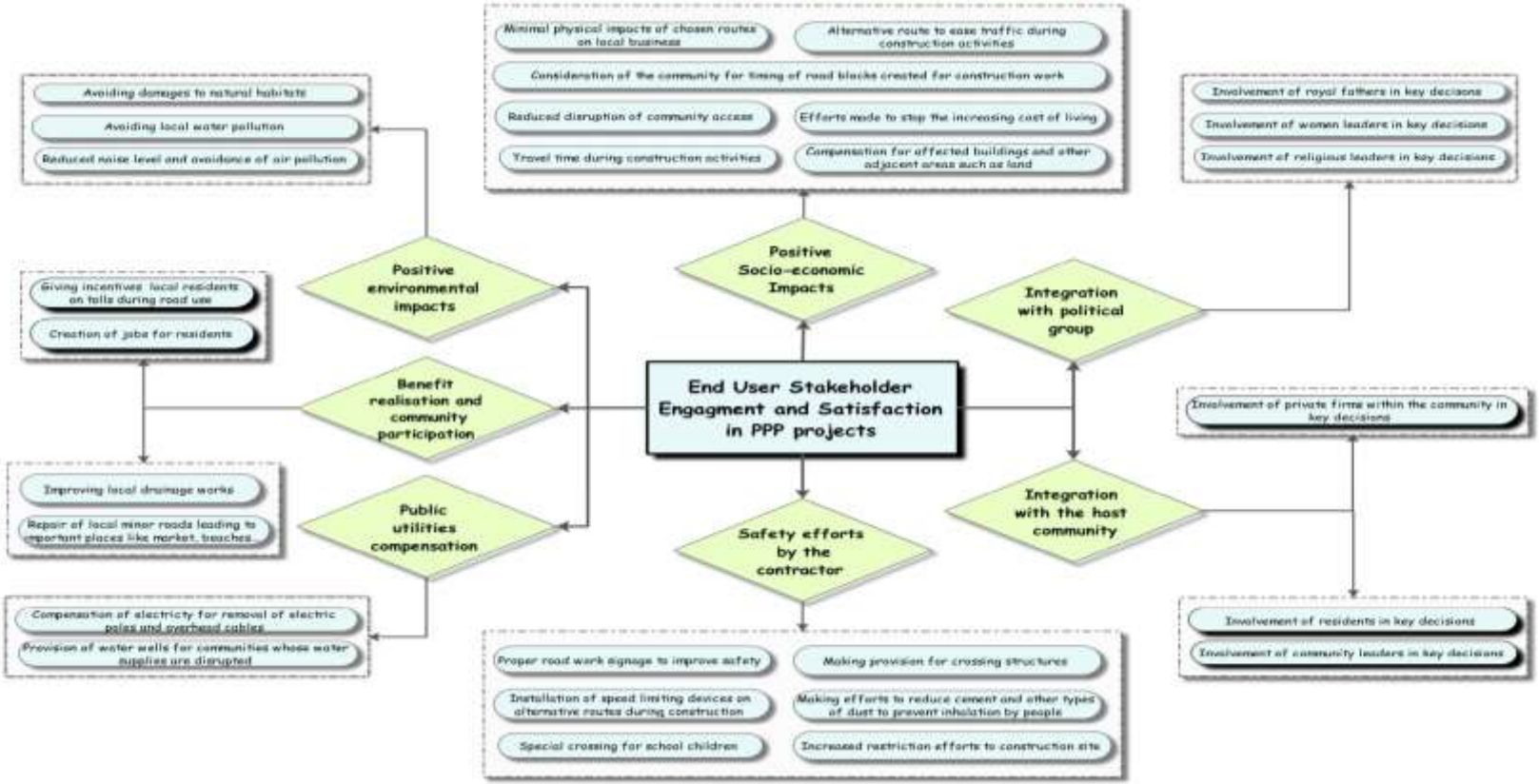

Figure 5.4: Developed Framework for End User Stakeholder Engagement in PPP projects in Nigeria

5.8 Chapter Summary

This chapter reveals how interviews were used to examined people interests, showing their clarification on 'how 'they observe events, time, and 'how' and 'why' different constraints had affected their activities before, during and after construction of toll road project. Interest is not increasing on the progress of PPP both in managerial community and academic arena but the survey was conducted through an in-depth interview technique in order to investigate deeper into the cause of significant marginalization of end-users stakeholders in an economically viable PPP toll road project without dynamics and interactions between the government and the host communities. In the course of the literatures that were reviewed as part of the reference point for this thesis, it was found that most available information on Lekki-Epe and Apakun Muritala Muhammed toll road project in Lagos Nigeria have been examined in the perspective of value for money, toll charges, traffic among others using predominantly quantitative method of approach without the consideration of qualitative aspect of it. The qualitative approach was used in this thesis to improve the understanding of foundation problems that play an important role before, during and after the construction periods. The underlying approach of this study also focused on qualitative data that was used as a tool for robust effort on end-users stakeholders' participation in PPP toll road project, and proffer recommendations on how to improve the synergy between the government and the host community.

The qualitative approaches were based on interviews with participants experimented from an extensive range of organisations working on embattled end-users stakeholders in an extraordinary populous Lagos state Nigeria. The names of the interviewee and respondents identities remain anonymous for ethical reasons. Unstructured interviews were conducted from interrelated PPP Project Companies and the host community in a preferred language and audio-recorded was carried out and later transcribed and translated verbatim in English. Two toll road projects were chosen for this study and field facilitators were engaged from Yaba College of Technology and community-based civil service that know the inception of the project to the end. The staffs recruited were young and middle class, active and educated male and female who are rewarded financially after the entire exercise. The recruited facilitators were paired in order to facilitate note taking and audio recording which was later transcribed and analysed. Purposive and snowballing sampling approaches were used to identify rich information from the participants among the

experienced staff of the PPP Company and also to elicit qualitative findings from direct end-users of the toll roads.

The transcribed data were subjected to thematic analysis to extract analytical and descriptive themes which is flexible and easily available instrument for analysing unstructured qualitative data. All issues discovered during interpretation through the interview transcripts were used to create conceptual categories which was regarded as measures/themes. The analysis is pragmatic in nature which informs the meaning, understandings and the authenticity of the participants, in which the observation of behaviours in terms of skills, actions, significance and realities denotes the interpretation of the happenings in the society. The resultant measures/themes and sub-themes are afterwards used as variables in the questionnaire (quantitative) used in this study. Numerical data were converted into functional statistic vis-à-vis opinions, attitudes, behaviours and other definite variables in order to comprehensively produce results from a larger population sample for the end-users stakeholders' management on PPP Lekki-Epe and Apakun Muritala Muhammed toll road. A descriptive study was set up in associations between variables showing variety of scores for the variables. Data were collected through self-administered questionnaire which are used in this thesis. The predominant purpose of this survey was to categorize features, sum total them and create a framework in order to describe any observation. The voluntary, office workers and community residents made it easier in evaluating and monitoring the surveys which was used in influencing the policy to informal conversations.

This chapter also exhibited the performance, analysis and interpretation of data collected from the end-users stakeholders' marginalization of Lekki and Apakun PPP toll roads project in Lagos State Nigeria through a designed questionnaire. The data generated from the respondents were used in arriving at the analysis such as frequency count and percentages involving tables, bar charts, pie charts and line graphs amongst others. Similarly, in order for research data to be valuable and usable, they must be reliable in terms of measurement stability or consistency in research findings repeatedly. Confirmatory factor analysis (CFA), Cronbach's Alpha statistics were used for data screening, model fit and reliability test. The Cronbach's alpha coefficient test results were gotten from SPSS. The reliability test was run and the overall Cronbach's alpha

coefficient gotten for serial numbers 1-33 variables were more than 0.8, portraying good internal consistency of the data. This has shown their usefullness for this research.

The SPSS software was used in carrying out an exploratory factor analysis. Series of factor extraction analysis ranging from the ‘maximum likelihood’, ‘principal component’, ‘generalised least squares’ and ‘principal axis factoring’ methods were firstly used in sequence to extract the factors in an attempt to choose the precise number of factors to be extracted. The principal component extraction analysis was finally adopted for this thesis. All methods resulted in a total number of 9 factors. The standard has been established to be based on abuse of the internal consistency reliability formula which depends on the eigenvalue and the reliability of the individual measures. The scree plot and the initial application of four different extraction methods were used to decide that 9 factors were to be extracted. A value of 9 was thus entered in the number of ‘factors to extract:’ box for the analysis. To create new typical variables for each extracted factor, the ‘save as variables’ box was ticked in the scores dialogue box, with the default regression method selected to create the variables. Variables’ representing each extracted factor was selected from the pattern matrix table in the SPSS factor analysis result. No questionnaire variable in this analysis had a factor loading outside the range of +0.3 and above or -0.3.

CHAPTER 6 DISCUSSION OF FINDINGS

6.1 Introduction

A critical worry in Lagos state Nigeria is the lack of infrastructure development, to keep up with the pace of urban spread and densification (Adeniyi and Ogunsemi, 2011). This has resulted in significant pressure on the current infrastructure base (Oyedele, 2012). The bottleneck of traffic created by congestion on the road linking the mainland of Lagos to the central business district on the Islands is extremely challenging, which has worsened not only by the lack of public transport systems either by government or private business enterprise but also lack of alternative mode of transport such as rail, waterways among others (Ajudua and Okwonkwo, 2014). The two PPP project roads considered for discussion are constructed to displays typical problems induced by the influx of large masses of population from the rural areas seeking wealth, employment and supposed better quality of life (Babatunde et al., 2016).The requisite and justification for the project is therefore necessary in order to decongest the roads in the central business districts of Ikoyi, Victoria Islands and Ikeja (Onyali, 2017), so as to make the areas more business-friendly. It is not surprising to hear that PPP projects has become unsuccessful due to opposition from end-users stakeholders (Akintoye et al., 2011). By the virtue of PPP in nature, it is primarily controversial and political because they follow the divesting of public opinion (Oyedele, 2012). The influence of end-users stakeholders in construction project cannot be overemphasised (Amadi et al., 2014). The end-users stakeholders usually do not kind-heartedly accept to the divesting of "public resources" in any way, either through PPPs or privatisation (Baroudi and Rapp, 2014). It is therefore important to properly measure the acceptance of the end-users stakeholders for any PPP toll road project (Yang et al., 2011), and find ways of mitigating any nervousness for residents before the commencement of any project. Based on this reason it is important to advocate for the integration of end-user stakeholders (Karim, 2011), to a project and must identify the safety opportunities and development of public benefits before, during and after the completion of the project. An inclusion and consultation programme for end-users stakeholders should be designed in order to mitigate any marginalization on PPP toll road projects (Nwoye and Iyiola, 2016). A synergy between arrangers of the project, government and the host community i.e. (end-user, stakeholders) is a sine qua non for vibrant and successful PPP projects (Zou et al., 2014). The synergy

which has been described as the benefits that any organisations gained by involving diverse ethnicity in the community. The absence of which resulted into struggles and hostilities that almost endangered the chances of achieving success (Nwoye and Iyiola, 2016) on both toll road projects.

The present tendency is for governments and private organisation to assign significant need to end-users stakeholders who encountered marginalisation throughout the execution of PPP toll road project in any form (Gangwar and Raghuram, 2015), accepting sole responsibility of providing necessary security and safety for the host communities at large. However, this is in accordance with the stakeholder accountability theory, which presumes the allocation of stakeholder welfare between both parties (Freeman, 2010). The main ideology behind this principle is simply that in PPPs the private and public sector partners have different priorities on the project and this should involves the management of end-user stakeholder interests (Kornum et al., 2013). Establishing project partnerships and employing lobby campaigns strategies amongst the host communities is the best way to manage stakeholders needs (Freeman, 2010). These are the crusade that has been repeatedly echoed in this thesis for the private sector to morally oblige the end-user stakeholders in project planning. The government should also consider the utmost priorities of end-users stakeholders when entering into any form of PPP toll road arrangement (Ponnappa, 2014). In principle, it is a risk that is better shared and mitigated jointly by both parties.

Ruggie John (2013), who is a special representative on business and human rights advocated in his report to the United Nations Human Right Council that there is need for significant costs associated with end-user stakeholder resistance to companies operations. In his report he orchestrated that the end-users stakeholder challenges may lead to significant higher costs for financing, project delays and even terminations of projects among others. Regarding to this thesis, both Lekki-Epe and Apakun Muritala Muhammed PPP toll roads Project Company in association with the Government did not carry Community Stakeholders along (Opawole and Jagboro, 2016). The end-user stakeholders refused to be involved from the conception phase which makes it difficult to get their support during the subsequent phases of the project. Hence, the threat of end-users stakeholders' opposition is very real (Freeman, 2010). At times, the mere fact that private sector companies are taking over government roles may aggravate public resistance

(Ng et al., 2013). Because end-user stakeholders suspected government attitudes with passion on the project, government needed to be transparent to the community (Lv and El-gohary, 2016) durig bidding process. It was established that the marginalization of community stakeholders at different phases of the project was almost injurious to the success of PPP project (Odeck and Kjerkreit, 2010). Community involvement and consultations from the project area were carried out in order to support the compilation of the views of end-users stakeholders living along the project road for effective survey computations (Lv and El-gohary, 2016). In addition, unstructured consultations were carried out with transport operators (private cars, public transporters, office workers, royal fathers among others) for interviews (Brisset et al., 2013). Community leaders, affected men and women were also involved in the discussion on how the PPP road project has directly or indirectly strengthen their businesses. The PPP toll road improvements were seen as beneficial to the people in the project area but the negligence of end-users stakeholders has increasingly become unforgettable (Lehtiranta, 2015). The social acceptability of the project was initially unwelcoming even with the potential long and short term undesirable impacts such as loss of income and properties among others (Loosemore and Cheung, 2015). The end-users stakeholders were guaranteed that sufficient and appropriate compensation will be made to mitigate the impact on the affected residents but to no avail.

Therefore, end-user stakeholder's major anxieties were prospects for getting fair reimbursement and observance to contractor's commitments during construction, employments opportunities, issues of safety and flood control measures (Park and Kim, 2013). The proposed benefits for the end-users stakeholder in order to dowse tensions emanated from the project area includes improved market openings for agricultural produce and non-farm items, efficient transportation systems, and better access to health, education and social services were partially fulfilled (Freeman, 2010). From the surveys that were carried out on this project regarding the end-users stakeholders' management framework in PPP toll road projects in Lagos Nigeria, the following results were extracted from SPSS factor analysis for further discussion.

6.2 Examining the evolution of PPP arrangement and identifying various end-user stakeholders' perspectives.

The ancient Roman and Greek era started PPP mostly in maritime business which is one of the oldest methods of financing project through Project Finance which is globally not new in the practice of PPP (Crozet, 2014). It was arranged under a bargain of loan repayments through the transaction of merchandises carried by the ship, considering the risks as part of agreements (Brewer et al., 2013). The fundamental philosophies of project finance are non-recourse financial arrangement along with equitable risk sharing. The risks will be shared equally amongst the private investors. Until recently, the most productive applications of projects are PPP (Gangwar and Raghuram, 2015) arrangement scheme. Both public and private sectors funded educational programmes in United State of America in the 1950s in which PPP was originated. The method was accepted by the developed countries in the 1960s as public-private joints arrangements for reawakening the public. The development of PPP is seen as a more robust procurement methods used to deliver various public facilities (Gangwar and Raghuram, 2015). There is no universal connotation that could be agreed upon on PPP due to its multifaceted underpinning philosophies (Crozet, 2014). Various comparisons using with other partnership arrangements have been tried by academic and industry practitioners (Mouraviev and Kakabadse, 2012) but to no avail in principles.

PPP has been described by Rosenau (2009) as a way of solving revenue hardship by bringing government to the market, empowering end-users and showing concerns about debt growth. Delmon (2011), from his own perspectives defined PPP as a way of growing or improving infrastructural facilities through legal contractual agreement between public and private entities. Recently, Yescombe (2011) described PPP with some significant elements as follows: As a long term contract (a `PPP Contract') between a public sector and a private sector party; for the design, construction, financing, and operation of public infrastructure( the` facility') by the private sector party; with payments over the life of the PPP Contract to the private sector party for the use of the facility, made either by the public- sector party or by the general public as users of the facility; and With the facility remaining in public- sector ownership, or reverting to public- sector ownership at the end of the PPP Contract. Public-private partnership became a matter for national dialogue amongst serious limitations to budgetary allocations facing the Nigeria government at both

Federal and State levels (Babatunde *et al.,* 2016). The introduction of PPP in Nigeria came as a third alternative to the absolute transfer of public infrastructures top private investors through traditional methods and privatizations (Jones, 2010; Sarvari et al., 2014). The Nigeria governments began a gradual shift away from the age long traditional policy of public sector procurements with more quests for precise analysis and innovative solutions in meeting the basic infrastructural requirements for end-user stakeholders (Sarvari et al., 2014).

The perspectives of end-user stakeholders on PPP, is to expect the private sector to deliver value for money in terms of innovation, project quality and delivery of project as at when appropriate (Zawawi et al., 2014). Delivering of public utilities such as roads, housing, health care services and other construction activities amongst others are part of the perspectives expected from the end-user stakeholders on PPP (Brewer et al., 2013). Transferring of risks and responsibilities of government to the end-user stakeholders in order to avoid budgetary constraints by paying toll where unnecessary is part of end-user stakeholders' perceptions (Gangwar and Raghuram, 2015). Listed amongst the major perspectives of end-user stakeholders on PPP are: To utilize available resources optimally; to reform all sectors through reallocation of roles and incentives with improved accountability; to increase the organizational plans and policies that will establish fundamental principles for valuation and transparency; to entice more skilled force with economic talent and orientation on effective performance if found amongst the end-user stakeholders.

6.3 Challenges facing the development of PPP in Nigeria

Infrastructural challenges faced by Nigeria against all various methods, the popularity of PPP is however on the rise, particularly in the area of roads construction, estates, markets, car parks including managing and operation of ancient infrastructural facilities such as conference centres, telecommunication, oil sectors among others (Abdul-Aziz and Jahn, 2011; Awodele et al., 2012). Over N15trillion has been invested in the last ten years by the Federal, State, and Local administration through PPPs in more than 25 major infrastructural projects. In furtherance to this developmental target, the federal

government of Nigeria has put in place a number of enabling laws (Ng et al., 2013) to regularize all contractual arrangements of PPP. This has been facilitating the effective implementation of projects and private sector collaboration. By principle, PPP projects are long-term activities that generally span between 25- 30years or more (Oyedele, 2012). The end-user stakeholders were presents with many inherent challenges and risk factors due to long tenor PPP projects, coupled with their complex contractual arrangements. However, these challenges are diverse across different nations depending on the level of their maturity in terms of PPP applications (Ng et al., 2013). The growth and development of PPP had been faced with a number of inherent challenges especially in Nigeria and country-specific risk factors as an emerging economy (Olusola et al., 2012). As highlighted by Babatunde *et al.* (2016), there is currently a growing support and political will from Nigerian government at all levels towards developing the PPP as a mainstream procurement policy. Most of the challenges have militated against the successful implementation of many early PPP initiatives in Nigeria. According to Ibem (2010), unless Nigeria is able to meet her World Bank infrastructure investment target of 7-9 percent of the GDP and summon various country-specific challenges for the developing economies to become realistic. Those challenges based on review of the existing literature are as given in the following sections.

6.3.1 Poor Management of Project Stakeholders

Most early PPP projects in Nigeria had cases of agitations from end-user stakeholders ranging from environmental concerns, land disputes, among others through the poor management of project stakeholders which is a major challenge in Nigeria's PPP procurement. Some of the agitations later end with litigations or court actions against government (Adeniyi et al, 2011). This agitation from end-user stakeholders was ascribed to the poor effort on the part of the government in encouraging policy enlightenment to citizens prior to projects' commencement (Adetola et al., 2016). The end-user stakeholders bemoaned the relative apathy of Nigerian government towards engaging citizens on designed projects that will benefit them (Ibem, 2010). Nigeria's PPP, can only develop if all end-user stakeholders can be effectively involved in project execution (Abdullahi, 2010). In order avoid duplication of functions; end-user stakehoders roles should be clarified (Akintoye et al., 2011). There should also be clarity of rules and regulations

through the government stating clearly the expectations, consequence of character, guidelines, and notice of principles should in case of any misunderstanding (Babatunde et al., 2016). At the beginning of any PPP programmes, communication analysis with end-user stakeholders must be deliberately incorporated.

6.3.2 Political instability and rancour

The unstable political climate in Nigeria has truncated advancement and policy stability of PPP; particularly policies to woo private investors (Kennedy et al., 2015). Changes in leadership with series of military coup de tat affected the development of PPP in the history of Nigeria (Adetola et al., 2013). Instability due to strike, civil commotion and riot inhibits the growth of PPP in Nigeria. However, the investors are apprehensive on associating with government in providing infrastructural facilities because of previous involvements in PPP and political instability (Oyedele, 2012). Most of PPP if not all that involved the government previously failed or ended in litigations and disagreements because of change in government (Babatunde et al., 2016). Nigeria infrastructure projects are mostly rushed through the executive council most especially towards the end of any sitting government tenure irrespective of stakeholder's advice. There will always be instability on the development of PPP if infrastructure facilities of a nation is been politicised hence causing an adverse effect on successful implementation of PPP which is meant to serves as a succour to the finance and infrastructure growth in Nigeria (Oyedele, 2012). The regulatory framework of PPP programmes are not adequately followed due to politics of nepotism (Adetola et al., 2016). Nigeria government in recent time nursing the ambition on how the nation will thrive in terms of development of infrastructure before 2020, and one of the shortest ways of achieving this objective is to treat determinedly with re-contracting infrastructure to politicians who do not have the interest of the nation at heart.

6.3.3 Lengthy Procurement Timelines

PPP projects in Nigeria are usually lengthy because of its infant stage coupled with many complexities in terms of finanace, project completion among others. The average completion time for PPP projects in Nigeria is between 6-8years (Babatunde *et al.* 2012.).

Nigeria is yet to modernise her procurement method in line with current demands and realities of public private partnership measures (Kennedy et al., 2015). Changing of political leadership is also one of the attribute that causes delay of many PPP projects where new government does not recognise continuity. After procurement, it takes another 180 days before the design of the project is considered laying claims to proof of financial capabilities of the private sector before the execution of the project (Nwoye and Iyiola, 2016). This challenge is precarious to the poor participation of indigenous private investors in Nigeria's PPPs (Nwangwu, 2016), as most investors are unable to structure PPP loans due to uncertainty about project duration. Before the advent of PPP, Nigeria government use to award construction projects to politician in order to settle them because of their political involvement with government which causes delay in achieving the main objective of developing infrastructure (Olusola et al., 2012). This void that was created in infrastructure shortfall and was lately franchised which paved way for the private investor.

6.3.4 Corruption

One of the key problems in Nigeria's public procurements is corruption. The procurement act regulates public procurement in Nigeria and aims to curtail the abuse of rules, standards, and processes in the award and implementation of public-sector contracts (Adeniyi et al, 2011). Between 20-60 per cent of government spending especially on procurement is missing due to malpractices and financial leakages within the Nigerian public sector (Olusola *et al.* (2012). With with more than one-third of business firms hoping to part with gratifications or payments to civil servants in order to secure government contracts (Babatunde *et al.*, 2014) In spite of the huge government budgets over the years in providing critical infrastructures, Nigeria continues to experience gaps between output expectations and government policy due to corruption (Adeniyi et al, 2011). Several efforts to reform public procurement policies has been done in which the most significant of all is the Public Procurement Act (Famakin et al. 2012).). However, procurement regulation has improved recently (Babatunde *et al.*, 2014) although political favouritism and large-scale corruption remains an important factor affecting effective public procurement especially when implementing PPP projects (Famakin et al. 2012). Public procurement system is a preferred option of bribe collection in order to curb the corruption syndrome where Nigerian politicians mostly influenced contracts from

government in ordernto secure kickback from the private investors (Adetola et al., 2016). The implementation of PPP suffered a significant setback due to corruption and one of the solutions to the problem is to involve end-user stakeholders in implementation and operation of PPP projects where stakeholders will continue to hold government responsible for unevenness and excellence service delivery.

6.3.5 Transparency and Competitive Procurement Process

Non-availability of regulatory frameworks where no model or reference points can be sighted made it difficult for PPP to flourish in Nigeria (Nwoye and Iyiola, 2016). Outside the occurrence of traditional methods of contract such as the Design and Build (DB), most contracts have been handled under the influence of political patronage without proper competitive tendering (Rana et al., 2013). This has created significant challenges in PPP related projects such as roads, rail, and power sectors with no precise laws administering the transactions and choice of concessionaires in developing infrastructure facilities (Kennedy et al., 2015). The early implementation of PPP in Nigeria procurement contracts had been shrouded in secrecy prior to the advent of regulatory laws such as Infrastructural Concession Regulatory Commission (ICRC) Act 2005. Though, with the ICRC Act 2005 the government has been aided in enforcing obedience between the Private and Public sectors through monitoring by government officials (Babatunde *et al.*, 2014). At times, contracts are signed before procurement process is carried out due to lack of proper documentation of design drawings and other documents for adequate presentation (Adetola et al., 2016). Unnecessary delay in procurement process is really affecting Nigeria PPP arrangement.

6.4 Investigating and identifying the challenges facing end-user stakeholders of PPP road project in Nigeria

6.4.1 Safety Efforts by The Contractor

6.4.1.1 Putting proper road work signage in place to increase safety:

Several numbers of safety measure should be taken into consideration in order to reduce the risk of accidents and regulate traffic behaviour. Some counties in Europe (United Kingdom, Finland, Spain, Hungary, Slovakia, Portugal and Norway) that introduced a safety-based inducement based on unambiguous road safety indicators in PPP road project (Rangel and Vassallo, 2013). Before, during and after upgrading road project different measures should be put in place in order to ensure the safety of residents, workers and drivers plying the project area. Rangel and Vassallo, (2015) described road safety design indicators as moderately heterogeneous across different countries. They can be adopted differently in variable in order to measure the final outcome in any formula employed. Those indicators can be built with the consideration of number of accident, fatalities and injuries based on the PPP project (Rangel and Vassllo, 2013). The PPP expressway toll roads are the parts of five dual carriage ways which pass through small populated areas e.g. the road project discussed in this thesis. Therefore, most drivers needed to adapt from rural to urban driving situations (Dirección General de Tráfico, 2011) most especially when driving in an urban area like in Lagos metropolis Nigeria.In order to render these procedures effectively, supplementary activities are necessary such as awareness raising campaigns especially for residents, public and pupils of schools along the project area.

The effect of many variables has been analysed in several studies which influence the frequency of accidents. Several authors (Chang et al., 2010; Persaud et al., 2010; Anastasopoulos and Mannering, 2011) have discovered relationship between accident frequency and traffic flow. It has been proven that frequency increases with traffic flow. Signs should be able to give messages in terms of advisory and information notifying the drivers about hazards ahead or traffic conditions along the toll road, and also radar attachment allowing the signs to discover and post the speed of each vehicle passing through the PPP toll roads to their various abode (Islam and El-Basyouny; 2013). The project companies should be able to design better signalling and alignment systems for community stakeholders if some profits are obtained from the safety incentives (Mills et

al., 2011). Other traffic regulators such as speed limits, traffic lights are effective way to control traffic flow in the project area; these must be properly enforced by the traffic officer in order to curb the drivers who intend to violate the safety traffic rules (Caliendo et al., 2013). Permanent inductive loop and portable counting instrument should be used to count the traffic flow of number of vehicles through a fixed section in both directions of the road (Wang et al., 2013). The control vehicles speed should be measured alongside both side of the road at different times of the day (Corthout et al., 2010). However, the regulators might be temporary during constructions which can be handy in nature as a perfect sign without causing any inconvenience or hassle. The regulators sign is designed to roll up when not in use, so it's convenient and easy to store, taking up storage rooms and minimal room in vehicles (Montella and Imbriani; 2015). The regulators are easy to transport as they can be stock in a purpose-built bag for handiness, mostly if multiple signs are involved.

With its reflective surface, the sign must be highly visible, even in low light, making it operative at keeping the project area safe. Going through the recommendations proffered on road signage, it is clearly shown that there is no proper signage that can increase safety of end-user stakeholders along projects roads which called for an urgent attention.

6.4.1.2 Installation of speed limiting devices on alternative routes during construction:

Speed is a significant factor in road safety. Speed is related to the risk of being involved in a crash and also affects the harshness of a crash (Elvik, 2012). Speed and risk of a crash is much more complex in terms of relationship. The installation of road speed limits system (fundamentally billboards) must be used to set the minimum (or maximum in some cases) at which several vehicles can lawfully travel along road of the project areas (Elvik, 2012). In order to enforce reduction of speed by the drivers the project companies should have installed multiple numbers of speed humps (elevated pavements spanning across a roadway) to reduce the speeds of various vehicles (Bekheet, 2014). This will control vehicles using alternative route so as not to endanger the lives of community stakeholders. The installation could be done randomly without any uniform engineering study which does not need any design, signage and markings. Speed surveys should be carried out to know the routes that are frequently congested during construction periods in order to ease the burden of the end-users stakeholders along the project route (Oviedo-Trespalacios et

al., 2017). This will ordinarily make an effort to cap road traffic speed during peak period. According to World Health Organisation (WHO), road casualties can be reduced when speed controls are identified. This can also contribute to the reduction of environmental impact of the road traffic (emissions, vehicle noise, and vibration) in order to fulfil the local community wishes of end-users stakeholders moving along the project area without using cars (Oviedo-Trespalacios et al., 2017). If the speed limit can be controlled to a barest minimum in congested periods, it will ease the condition of the traffic during peak periods (Elvik, 2012). Comprehensively, tight curves, bends and slip roads must be considered with lower limit of speed. Speed limits are not properly introduced along the projects routes.

6.4.1.3 Making provisions for crossing structures (Pedestrian Bridges)

There are various factors in association with the desirability of a crossing structure in the project area. Pedestrian infrastructure (e.g. crosswalks) is important in order to facilitate walking environment along the project area thereby improving local economic development (Amoako et al., 2014). Definitely, one of the most cost effective ways to provides crossings for animals is to use highway crossing structures meant for other uses (Obeng-Atuah et al., 2017). The numbers of animals, humans using the road plays a significant role in reducing the effectiveness of the structures. Expressways also affected wildlife by hindering patterns of movement, and finally reducing and isolating community stakeholders (Grilo et al., 2014). Therefore, adequate provision and ensuring balance maintenance of pedestrian infrastructure in terms of accessibility, suitability and availability for the various end-users stakeholders of the project communities is a prerequisite for achieving urban agreement, functionality, and unity (Oben-Atuah et al., 2017). There is no provision for easy movements of cows, pigs, goats and other habitat during construction which hinders the growth of wildlife habitat connectivity, increase animal/vehicle collisions, increase wildlife mortality and endangered the safety of end-users stakeholder and engineers working in the project areas.

However, notes that the emphasis of road development projects in developing countries both contemporary and colonial tends to centre on safeguarding mobility for vehicles rather than pedestrians (end-users stakeholders) protection, making the safety of stakeholders a giving secondary consideration (Tulu et al., 2013). Deaths of millions of

vertebrate animals are caused by vehicles on the project road daily (Lewis et al., 2011). The geographical environments of the projects area are swampy, sandy and marshy allowing amphibians and reptiles in the communities predominantly susceptible to the effect of roads because of their slow-moving nature (Ferronato et al., 2016). Combined guide fences and underpasses to pipe animals beneath expressways could be the most successful structure for amphibians and reptiles in an urbanized toll road such as the ones considered in this thesis (Gagnon et al., 2011; Lesbarreres and Fahrig, 2012). However, presently animals have not use any of the crossing structures along the discussed toll roads. There is little or no provision for any pedestrian bridges along the projects road which is endangering the end-users stakeholders' life in terms of incessant vehicular accident.

6.4.1.4 Create special crossings for school children:

Most of developed countries are undergoing a fast shift from mass transit to vehicular travel, with serious significant in terms of road safety, traffic flow, environmental quality and liveability (Ewing et al., 2011). In these situations, home-school trips, which represents a considerable share of daily trips, is often overlooked by the project companies. Most of the prevailing literature on this topic, in Western nations, stop from the concern that there is a link between active forms of school trips(walking or biking) and the overall well-being of schoolchildren (Van Loon and Frank; 2011). However, a home-school trip also has an effect on urban liveability. School children trips here are expected to increase environmental quality concerns, major safety and equality. Therefore, the determination of whether school children travels actively and autonomously to school should be evidence that urban form and amenities are present (Phillips, 2015). Principles of urbanization for the provision of special crossing include ease of access criteria such as undesirable travel conditions (footpaths, steep gradients, and access through industrial areas), upper limits on travel time and maximum distances were not available for community stakeholders, even the crossing of dangerous intersections and busy traffic roads where stakeholder's recorded high accidental rate (Ewing et al., 2011). Considerable emphasis should have been placed on dynamic transportation (i.e., cycling or walking) as it is related to school children's transport along the project route to and from school. The cyclability (and walkability) of accessible routes along the projects community should be

determined based on variables (Giles-Corti et al., 2011) such as traffic experience, street connectivity, the project companies should have provided controlled intersections and sidewalks with multiple number of crossed roads that will reduce traffic speed/density (Salmon et al., 2013). Crossings in the project areas are not conspicuously seen for school children crosswalk to the other side of the road. Even though, it was learnt that the project company did not make any provision for crossings during the implementation stage which made it difficult for the community end-user stakeholders to cross safely across the flow of vehicular traffic (Conway and Bourne; 2013).The public should not assume that the vehicles will stop when approaching especially if the visibility is poor, therefore it imperative for the project organisation to make adequate provision for zebra markings, speed breakers where vulnerable road users like school children frequently cross.

6.4.1.5 Effort to reduce cement and other types of dust:

Natural aggregates (cements) in construction projects are of high demand and the rate of demand is constantly rising with fast increase in infrastructure projects both in developing and developed countries (Arulrajah et al., 2012). Progressively, natural quarry materials are scarce and also the economic cost with environmental concerns of using it is rapidly increasing. The use of construction and demolition materials is increasingly in high demand but the preservation of natural aggregate (cements) is economically important but harmful to community stakeholders (Saride et al., 2016). Silo are used as cement storage device along the project routes in order to lower cost and economic savings but became environmental burden due to the released dust during batching which endangered the community stakeholders health conditons (Gómez-Meijide et al., 2016). Air qualities are anticipated and are unavoidable especially during the construction phase (Arulrajah et al., 2015). The air quality during construction in the areas of study is comparatively affected by the pollution emanating from the excavated soil, laterite, cement in the rotary plant and quarry dust imported from quarry sites (Ciancio et al., 2014). The adequate protection of the neighbourhoods along the project route is one of the primary features of ecological development with an emphasis on reducing greenhouse gas (GHG) emissions.

The universal CO2 emissions in large quantities is as a result of concrete use (Kline and Baecelo; 2012). Hence, it is important for construction firms to find a lasting solution in

terms of reducing CO2 during the batching and usage of cement at the time of construction (Kline and Baecelo; 2012). Different machinery and vehicles that were used during various stages of decommissioning and site restoration released various gaseous substances such as Nitrogen dioxide (NO2), Sulphur dioxide (SO2) and Carbon monoxide (CO), among others, which had serious negative effects on air quality and human health of end-users stakeholders of the project communities. NO2 and SO2 are major contributors to photochemical pollution (Reimann and De Caritat; 2012). NO2 gases are by-product of motor vehicles, explosives, welding and burning of fossil fuels. These endangered the community stakeholders with health hazards by attacking their lungs and throat which was linked to acute and protracted respiratory disease. Subsequently, SO2 destroys buildings and vegetation along the project routes, and harmfully affect life of seas, oceans and creeks of the Lekki-Epe host community (Seinfeld and Pandis; 2016). Community stakeholders with asthma are largely affected. It also endangered plants and flowers by parching and bleaching the leaves with the undergrowth affected. CO was produced during unfinished combustion of carbon-based fuels (Andreae et al., 2005). CO causes headache and drowsiness when inhaled at even low concentration; not to talk of high concentration which causes nausea, dizziness, neurological damage, respiratory failure, convulsions and even death (Dockery and Pope; 1994). Effort to reduce cement and other types of dust in order to avoid inhalation by members of the host communities was inevitable. The recent environmental initiatives strongly led by developed countries (Sonebi, 2015), believed that the construction industry should work harder to reduce its environmental effect of cement on the community stakeholders and improve on changing the image of being an unclean industry.

These engineered and reduce the ambient air conditions in the project areas. The main effects of site restoration activities on quality of air were in terms of gaseous emissions and suspended particulate. The level of dust pollution ultimately reduced during the rainy seasons and after completion of the toll road projects. The road surface were not frequently sprayed with water in dry weather conditions and trucks carrying fine materials that are easily windblown were not covered with tarpaulin thereby risking the respiration of the host communities along the project aresa (Kazmee et al., 2016). During the construction phase, the companies' truck drivers, labourers, and other travellers along the neighbourhoods of the projects were mixing socially with the local communities thereby spreading the infectious diseases including tuberculosis, and other air polluted disease to

the residents of the host communities. It was believed that the lead content in the vehicle fuel emissions generally decrease the time of construction and operation of the project duration. The public should have been educated when such pollution are going to be taken place.

6.4.1.6 Increase restriction efforts to construction site so as to increase safety:

Several design firms were not talking about occupational safety of end-users and community stakeholders of road construction (Leung et al., 2012) the safety of stakeholders must have been factored in from the design stage to reduce the devastating rate of accident along the project routes. It is the utmost responsibility of the contractors (Project Companies) to make provision for safety of the community stakeholders vis-à-vis in designs, bearing in mind the safety standards and also best preparation that will prevent any future accidents from occurring (Behm et al., 2010). The construction site must be preserved for security reasons as if it were completely operational environment. The basic requirement of safety measures must include drawings showing safety risk assessment form (Elvik, 2012; Zou and Sunindijo; 2015). The ambiguity and complication in the nature of construction firms requires technology to adopt safety planners as innovative as possible to make sure they are covering all anticipated surprises that might arise from accidents along the project routes (Zhou et al., 2015). The studied areas are potentially unsafe place and therefore health, safety and job-related impacts needed to be addressed in the immediate neighbourhood of the project areas, work sites and workshops. Road users including pedestrians, cyclists and motorist were subjected to risk, and were allowed to witness the extent and nature of obstruction during and after construction.

The most concern area of safety among researchers is falling objects and hazard of falls as the foremost causes of lethal accidents in the construction organisations which have been repeatedly studied to consider a strategy to design of safety (Zhang et al., 2013; Zhou et al., 2015). Signals passing on the communication that a certain risk is ahead must come from special procedures or conditions that generate, drive up or down, or just specify the likelihood of that risk along the project routes is highly important (Saunders et al., 2015). Frequent communication with end-users stakeholders along the project routes must include comprehensive broadcasting of safety performance. The safety awareness were not properly handled leaving the vulnerable groups such as elderly people, children and

those with disabilities unattended to (Sousa et al., 2014). The design and manufacture of intra-block automobile communication streaks which is an important component that will provide safety of road traffic for construction and operation within the neighbourhood communities should be made avalaible (Sherbina, 2017). Usually, the intra-block transportation network was designed for neighbourhood community to serve as safety of life and activity of stakeholders, hypothetically keeping the highest level of comfort by safeguarding unwanted noise, gas and dust (Sherbina, 2017). The project areas were not properly hoarded with plastic/galvanised fence. Warnings were not properly given to road users in a reasonable and practical manner, full signing, lighting and guarding were not provided as quickly as possible (Meardi et al., 2012). Therefore a decent security fence round the site to increase safety is compulsory with 24-hour gate control.

The fence needed not be at the boundary of the site even if the whole site is under construction, wether additional fencing is expensive to build and manage or not (Azhar et al., 2012). The fence was erected to keep out community stakeholders for their own safety and for the safekeeping of materials on site. There was no availability of code that supposed to direct the operatives, supervisors, managers, planners and designers who are responsible for making sure that all streets and road works are safe for both operatives and the public. This has violated the basic rules of risk assessment in order to determine the appropriate traffic management layout so that the correct equipment can be arranged. The works should cause minimum inconvenience to end-users stakeholders. The safe route provided for the pedestrian was inadequate excluding access to adjacent buildings, properties and public areas where necessary (Park and Kim; 2013). There was no provision for those with small children, pushchairs and those with reduced mobility, including visually impaired people and people using mobility scooters or wheelchairs.

6.4.2 Socio-Economic Impact

6.4.2.1 Choice of route for physical effect (demolition of buildings)

With regards to end-users stakeholders in the rural sections around the project areas who are mostly Yoruba, such as property owners, landowners, traders and other users of the road corridor which constitutes of other tribes. The choice of route by the governments

and Project Companies in terms of physical effect (demolition of buildings, loss of lands and crops) supposed to have undergone extensive consultations and discussions with community stakeholders (Shull et al., 2014). This should have been undertaken during the development of the Resettlement Action Plan (RAP) that was supposed to be conducted separately for these projects (Burke, 2017). The road developments were seen on the whole as beneficial to the residents in the project areas. The people living within the Victoria Island, Oniru, Lekki and Ikeja axis were considered as elites comprising of entrepreneur, top civil servants, oil company executives and bank executives were arbitrarily consulted while the poor people that can be found along the same corridor of the project area who resides in Elegushi, Osapa London, Agungi, Kuramo, Maroko, Ilasan, Ajah and Oshodi were marginalized in terms of due consultations before and during construction periods. Market places and small kiosk located at the major road junctions (Anwar et al., 2016) used by hawkers and other micro-enterprises were destroyed without notifications. Some project planning traditions must be mirrored in the layout (Burke, 2017). Temporary spoil heap areas and progressive excavation must match the planned building practise (LePree, 2016). Affected residents, regardless their legal status were bullied by the government before the entitlement cut-off date which is the date when the assessment of the residents involved in the project areas were to be carried out. It is ideal (where possible) to provide neighbouring or adjacent land for affected stakeholders such as newly acquired sites by the government in order to relocate genuinely stakeholders (Ament et al., 2014). Buildings and other developments of a non-permanent structure including drinking sheds, huts, graveyards, drying racks, which has been approved by the local government authority, were also destroyed. Hence, the major concerns of community stakeholders were prospects for getting fair compensation and adherence to contractor's obligations before or after the completion of the project.

6.4.2.2 Provision of alternative route during construction to ease traffic:

In recent years, interest in the exhibition of PPP toll roads with respect to traffic has incredibly increased (Gomez et al., 2016). Therefore, road authorities seek alternative methods to ease traffic during construction at peak periods. Numerous studies have addressed the erroneousness forecasts in the transportation sector but forecasts on toll road traffic are relatively rare (Nicolaisen, 2012; Odeck, 2013). The traffic flow along Lekki-Epe axis has established the development of the carrying capacity of the road network

which has demanded for an alternative route during construction of toll road. Apakun Muritala Muhammed toll road had a fantastic alternative route which most motorists' preffer during and after construction. Previously, the way out is to build new road as far as the means is available (Stoker et al., 2015). But expanding roadways with the determination of reducing congestion during peak period has been found to be very costly and ineffective (Downs et al., 2014). Several researchers discussed against comparing the superior mobility brought by new roads in improving quality of lives of community stakeholders and associating road construction with community compensation which should have been established by reducing access to local facilities and interruption of social networks, vibration and noise among others (Bhatia and Wier, 2011; Skovmand et al., 2011). The only alternative route that was available for the Lekki-Epe residents is the Oniru bye pass and part of foreclosed route along the project area which was found to be the best alternative route in terms of traffic and achievable geometry. Furthermore, reduction in travel cost, travel time, etc., resulted in inducing travels emanated from the enhanced level of service (Mihell and Hunt, 2011; Næss et al., 2011; Seong et al., 2011). Likewise, a sound developed road network gives travellers more routes options to choose from and better route choice (Lakshmanan, 2011) which will contribute to healthier functioning transportation network.

Usually, infrastructural investments give local outcomes and are essential means to deal with traffic complications for a smaller community, or a section of an expressway with the heavy traffic volume (Moriyama et al., 2011; Verhetsel et al., 2015). A usual way of reducing congestion in larger cities (Lekki-Epe expressway) is to create loops or ring roads, to divert peripheral and through traffic round the city rather than through it. Construction of bypass changes the roadway system, reduce travel times and improve traffic flows (Elias et al., 2011). Considering the effect on residential communities, several studies has confirmed that bypasses have a positive impact by reducing inner city truck traffic, improving visibility and accessibility, and creating chances for new development (Elias et al., 2011; Leong, 2012; Leong et al., 2013). Additional studies establish negative effects including high infrastructure and environmental costs, development of sprawled low-density among others (Antipova and Wilmot, 2012). Some researchers called for cautious deliberations on construction of bypass proposals because of the risk in wholesale and retail activity in the project area (Antipova and Wilmot, 2012; Cena et al., 2011; Qi et al., 2013). Socio-economic activities along the neighbourhood of the projects were also

hampered while movement of residents, goods and other stakeholders are restricted during construction. This situation caused severe disturbance and nuisance (traffic jams), which had resulted to end-users stakeholders time wasting. Recently, a study had demonstrated how the network can be improved in terms of performance and vulnerability reduction such as (change in vehicle travel time) if alternative links can be joined to the existing route, especially around heavily used areas such as Lekki-Epe expressway (Jenelius et al., 2013). Furthermore, the increase in traffic induced by the construction of the toll road was significantly more than the traffic generated by the limited capacity of the previous road. Widening of the road capacity and road repair remained an interesting option by the policy maker in order to reduce congestion around many towns and villages along the project routes such as Apakun Muritala Muhammed toll road (Wang et al., 2014; Winston and Mannering, 2014). This will definitely enhance the avoidance of traffic during peak period along the project routes. However, this option had involved important measures in displacing the community stakeholder to other towns and villages. The state government argued that an alternative route provided for the Lekki-Epe stakeholders is through Oniru market road; this was immediately rebuffed by the end-users stakeholders along the neighbourhood telling the state government that any alternative route should be parallel with the existing road and must not be a complex route to get to their various businesses and homes.

6.4.2.3 Reduction of disruption of community access:

Natural assets are essential resources in community livelihoods. Therefore, access to them clearly has an effect on the diversity and living strategies (Palazuelos et al., 2013). Access to natural resources can be assumed from four perspectives: qualitative, quantitative, legal and temporal. The qualitative perspectives discusses about the quality of assets and their efficiency use, while the quantitative aspect discusses about the size and diversity of assets that affected the accessibility of stakeholders. The legal aspect exposes the rights under which stakeholders can (or cannot) exploit assets, and the temporal perspectives discusses about the amount of time stakeholders can use the natural assets. Accessibility to natural assets can bail out stakeholders from poverty (Palazuelos et al., 2013). This indicates that to build and improve a sustainable living, the access to natural resources needed to be identified within the community neighbourhood which has not be in existence along the project routes (Dao, 2010). The main impacts of discharging and reconstruction of road

attract traffic build-up in the project area and a high likelihood that community stakeholders were subjected to significant physiological stress as a result of disruption in gaining access to their respective abode (Penz et al., 2011). The lives of the community stakeholders that cannot be resettled remained challenging and endangered (Biu et al., 2013). The contractor and the state government should have prepared some programs to enhance and support the livelihood of the affected stakeholders, but unfortunately these have been largely ineffective.

This study laid emphases on livelihoods based on access to their various homes and business resources (Biu et al., 2013). The resources and resettlement rights policies should have been put in place for the affected stakeholders as part of their livelihood strategies, instead of focusing on physical asset replacement and cash compensation which is not even available. Compensation for loss of houses, offices and lands are not implemented (Penz et al., 2011). Therefore, the accessibility of stakeholders to their natural assets was hampered during construction. No mitigation was required for this impact, from the viewpoint of the project proponent but rather threat and other things were showcased by the governments (Dao, 2010). Most of the construction zone in developed countries where road projects has been executed usually accommodates procedures for renovating or building existing structures where contractors showcase a sign post that will state “Sorry for any inconvenience we cause in this neighbourhood” (Biu, 2013). Meanwhile, the state government needed to enact laws that will protect the end-users stakeholders during such disruption when carrying out a new PPP project. Additionally, the government should provide extra facilities and infrastructure needed to cope with the increased populations in any project area.

6.4.2.4 Make efforts to stop increase in cost of living and provide basic infrastructure:

Road construction plays a significant role for the development of community, local and national economies (Behm et al., 2010; Osei, 2013). The developed neighbourhood which comprises all living spaces and structures modified or constructed by both public and private sectors needs welfare and social benefits (Fadista et al., 2014; Sarkis et al., 2011). Construction industry should strengthened and raise a quality of life for stakeholders as it provides tangible infrastructural facilities and build environment in accordance with the

basic needs, values and desires of end-users (Myres, 2013; Osei, 2013; Diaz et al., 2015). Hence, life, pleasure and basic satisfaction of community stakeholders are interconnected with the quality of the built neighbourhood thus it is one of the average displays of excellence life (Moht, 2013; Pearce et al., 2013; Sassi, 2016). This project has a negative impact on the end-users stakeholders in terms of multiple toll charges by the state government which invariably increase the cost of living through hike in transportation fare (Sev, 2011; Balaban, 2012; Hunt et al., 2014; Mattews et al., 2015). In spite of the fact that the project has been completed and their admittance into use has direct effect on end-users welfare, the PPP road development generated countless unplanned adverse effects on community stakeholders.

The proposed socio-economic, social and security impacts are considerable but increase in cost of transporting foods item, construction goods and other meaningful goods of livelihood are extra ordinarily unbearable. Particularly in developed area (Lekki-Epe expressway), due to high density of stakeholders, implementation of road construction projects turns out to be the causes of serious pains to the host community and end-users (Celik, 2014; Gangolells et al., 2016; Ferguson, 2012). Living conditions around the geographical location is absurdly mixed. Massive increase in house rent contributing to economic degradation while improving the quality life of stakeholders ranging from its internal human capital to the local communities in which it operates has not produced any positive impact on the society.

6.4.2.5 Consideration of the community on road blocks timings:

A rising number of construction engineers have acknowledged that end-users stakeholders using significant amount of time in high traffic hours are prone to risks in various ways (Benítez-López et al., 2010). This significant effect of traffic on community stakeholders all over the world has increased interest on identifying methods of reducing numbers of road blocks (Li et al., 2014). Crash cushions and guiderails are better in injury control, reducing the number of stakeholders moving along the project site in order not to damage construction equipments (Li and Zou, 2011). The disruption caused by stakeholder during road construction is irresistible (Chen et al., 2011). Installation of road blocks should be subjected to strict control in making sure that it does not inflict profound and irreversible damage on the environment and community stakeholders. The road neighbourhood

involves communication between vehicles, traffic rule, infrastructure, Project Companies and community end-user stakeholders (Prat et al., 2015). Stakeholders are the major causes of road blockage

Timings during construction of toll roads were quite alarming due to traffic obstruction, which normally infringes stakeholders' movements when construction was in progress (Nathanail and Adamos, 2013). The realization of project objective was predicated on the assumption that the economic, security and social environment will remain conducive for the community stakeholder's development (Boulanger and Stenhouse, 2014). Justification measures are suggested to mitigate the negative impacts of the project and maximize the positive impacts but they are primarily preventive, reducing or balancing the negative impacts of the project is quite important (Caliendo and Guglielmo, 2012). The disruption of road traffic during the construction period should have been avoided but was neglected. When the toll road was in operational stage, the fear that communities can get splited-up or cut-off as they were no longer conducting their ordinary activities on either side of the highway was imminent (Yeung and Wong, 2013). Another constraint concerns were the disabled who were no longer crossing the roads when the blockage has taken effect. Highway crossing that might take account the needs of the disabled were not provided.

6.4.2.6 Compensations to affected building and adjacent areas:

The utmost challenges to redevelopment and road construction stem from what seems to be the spontaneous nature of community growth in the city which has been urbanized due to the municipal population that precedes the expansion of many road networks (Alimi et al., 2014). Rights of way need to be acquired in order to build new roads or expand it, and is likely to have an impact on both commercial and residential activities (Ikioda, 2016). The bulk of roadside enterprises along the toll road are small and informal business which initiated redevelopment in terms of demolition and clearance of adjacent structures, threaten the survival of the helpless stakeholders struggling to make ends meet at the boarders of the project areas (Aderamo, 2012). Efforts should have been made to allow community stakeholders along the toll road to make an arrangement for alternative habitat before the commencement of demolition exercise (Ikioda, 2016). On the other hand various stakeholders who rely on roads as means of livelihood to sustain their day-to-day activities (Alimi et al., 2014). This is achieved through the hustling and bustling of

community residents during traffic by selling some handy goods such as recharge cards for phone airtime, cold drinks, and fruits among others. It can be acknowledged that development of road infrastructure has a huge advantage in reducing traffic, improve road safety and mostly developing the economy along the project communities while eliminating unnecessary happenings.

Evaluation should have been established on perfections of payments on permanent assets of community stakeholders, assets such as structural works and buildings, lands, petrol stations, fences-including chain link fences (Aderamo, 2012). The plantation and protection of technical materials and equipment block walls, gates among others are expected to have been estimated on the basis of current values replacement costs of comparable structures. It is therefore appropriate to examine the conflict that happens between roads serving stakeholders for the purposes of transportation development, access and mobility against accommodating the varying meanings to roads engaged by the end-users (Brehm et al., 2013). Generally, the displacement of community stakeholders whose activities align with the road boundary often fuels unfairness for the poorest of the poor, especially vulnerable stakeholders who in the lack of alternatives grieve with their livelihoods as hawkers (Dalakoglou and Harvey, 2012). Other developments of a non-permanent nature including huts, drinking sheds, drying racks, grave yards should have been subjected to the relevant legal compensation rates there-in. Where land within the road reserve was held on a registered title (Ikioda, 2016), the government should have made alternative solution for community stakeholders in provision or replacement of abutting structure.

The loss of registered title and other legal abutments jeopardized stakeholders hope of getting any positive support from the state governments (Alimi et al., 2014). However, where the road was re-aligned or diverged from the original course, such extra land measured by the government surveyor, the community stakeholders should have been compensated in accordance with the Land Act (Atubi, 2010). Compensation procedures for the affected stakeholders, irrespective of their legal status are eligible for some form of assistance if they occupied the land before the commencement of the toll road project (Ikioda, 2013). The main determinant factor for compensation should have been on the basis of a pre-project census where all residents would be identified. Replacement costs along the toll road should have been considered separately apart from structures, houses,

crops and trees (Atubi, 2010). Locations/abode for relocation should have been identified for community stakeholders. The possibility of resettlement should have taken place by setting-back existing occupations away from the toll road construction, or by relocating within the same community along the project area (Aderamo, 2012). The residents whose properties were removed should have been given at least six months' notice before the commencement of the toll road project (Kamete, 2013). Official and practical arrangements for identifying and preparing relocation habitant for the community stakeholders were not established (Alimi et al., 2014). Project company and state government in collaboration with local councils of Oba's, chiefs and village leaders should have been responsible for ensuring that vulnerable households received adequate assistance during the process of resettlement.

6.4.2.7 Travel time during construction:

A sum of factors affects travel time and its inconsistency. Traffic congestion escalates the ambiguity of travel times as well as the travel times themselves. There are two immediate consequences of congestion higher than average travel time and travel time. The classification of such congestion can either be non-recurrent or recurrent (Okwaraji et al., 2014). Non-recurrent congestion is caused due to a typical incident while recurrent happens daily during peak-hour delay which is due to excess demand of highway capacity (Ning et al., 2011; Agarwal et al., 2016), adverse weather events, work and construction zones and disabled vehicles (Jarrett et al., 2012; Hou et al., 2013) and special activities. Project activities along the toll road during construction should have been concentrated on times when traffic flow is off-peak. It is regularly recommended that when a new toll road is adjoined into a network that was previously busy, the daily or weekly build-up should be taken into consideration in determining the likelihood of a traveller using one or more routes (Odeck, 2013). Alternative routes should have been provided for community stakeholders during the PPP project operations in other to ease the effects of bottlenecks that were created by the construction activities (Fosgerau, 2010). This intensified the increase in volume of vehicles along the project areas and also decreased the width of the road for end-users stakeholders. In essence traffic build-up in the project areas became unbearable for the community stakeholders.

Developing travel conditions generated a cycle of cumulative negative impacts for the community stakeholder's living along the project neighbourhoods. In order to mitigate these impacts, easy accessibility should be created through a sure and temporary service road free of blockades, impediments and disorder during vehicular movement (Fosgerau and Engelson, 2011). Amount of travel times and variation of travel times can be reduced by implementing travel demand management (TDM) schemes (Williams, 2017). Furthermore, TDM systems relieve traffic congestion by providing alternatives route, travel modes and improving the reliability on road network (Liu et al., 2012). This kind of welfare should be integrated in projecting economic benefits by applying some methods for improving road traffic conditions for the end-users stakeholders of the project neighbourhoods (Taylor, 2013). It now becomes important in an evidenced based toll road project that the journeys on the road network can be progressively associated with a designated arrival time (Small, 2012). The proceeds realised by the reduction of travel times should be projected in the traffic planning for any forthcoming toll road project.

6.4.3 Benefit Realisation and Community Participation

6.4.3.1 Creating jobs for residents:

Several authors has shown that capital venture in a PPP road infrastructure project may perform as a facilitator for social transformation and economic growth (Cervero and Kang, 2011; Kim and Jeon, 2014; Neuman and Smith, 2010; Padeiro, 2013). The method of living is changing as the stakeholders in the community areas increases, generating a need for bigger environment (Atkinson and Blandy, 2013). The perspectives of local residents in getting jobs in project communities are facing so many challenges (Newton and Glackin, 2014). Though it is still undecided as to who should be affected by PPP road infrastructure development and to what magnitude it will benefit community stakeholders. The contractors are looking at situations where workers are unregistered, household with an informal settlement, individual home builders and independent retail entrepreneurs including migrant looking for a new source of income will substantially contribute to the infrastructure transformation but lacked construction knowledge (Kwon et al., 2014). The findings included the changes that are expected from the built environment which is potentially associated with the new Lekki-Epe and Apakun Muritala Muhammed toll roads. Employment seekers in the project areas are mostly youth who are willing to work

for the project company irrespective of the job specification and payment, but the job provider (project company) relied on external workers in particular with labour intensive construction works experience (Neuman and Smith, 2010). These apprehensions reveal the risks stakeholders perceived concerning the undesirable effect of PPP road infrastructure development. The only potential way of alleviating these fears is to build trust between the community stakeholders and residents end-users that are willing to participate in construction project (Pennanen et al., 2013). The prominence of trust in human dealings has been established long time ago with several research effort carried out in various discipline (Padeiro, 2013). There was much eagerness among the roadside communities that local labour should be employed on the road project, especially to carry out manual and unskilled responsibilities (Kwon et al., 2014). Supporting the operation of youth empowerment, the residents that specialized in road works are few in numbers and the possibility of creating new jobs through the highway management and maintenance are cumbersome (Huong et al., 2012). The number of local people who could be employed by the project will be in the region of 50-100 people but the project company found it difficult to allow the community stakeholders partake in technical works; even the non-skilled works such as flagman, sweeper, and gateman among others are not available (Nykanen et al., 2013). The community stakeholders were accustomed with the diplomacies of the project company, but no concrete support from the government to instil the confidence on the contractor in terms of community support (Trinidad et al., 2015, 2005). This shows that community residents pay more attention to various concerns on the infrastructure development when it happens closer to them and when they presume to have more individual relevance.

In this regards, women of the community are significantly left out, since they are often the ones that are regularly involved in the usual activities of fetching water, and cement mixes to various points in some construction site (Nykanen et al., 2013). The skilled labour forces were mostly non-locals from other parts of the country if not outside Nigeria, operating heavy equipment. However, truck drivers and masons should have been be sourced from the local residents but to no avail (Padeiro, 2013). Financial opportunities for local contractors within the project arena who may be contracted to provide services such as transportation, supply of sand and other construction materials are marginalized (Huong et al., 2012). The community stakeholders enjoyed increased in cash flow during construction, which arose from the patronage of food hawkers and other local wares by

construction workers. The income flow for property owners who rented their apartments out to construction workers soared for economic gains (Victoir and Zatsepine, 2013). These in turn lead to an improvement in financial status of the community stakeholders living within the project arena (Kim, 2012), since the construction workers have no option of external bargain. These are the only opportunities that were made available for the community end-users because the project company has lesser or no choice.

Hence, in order to minimize cost due to influx of job-seekers, the contractor prefers to give employment to outsiders because required skill level is not available for local residents (Trinidad et al., 2015). The use of workers from overseas on the project areas generated conflicts with the local residents, when the imported workers failed to respect their local customs and habits (Guerra et al., 2012). Construction Companies setting up their work teams (particularly the unskilled labour) outside the project areas drastically reduced the possibilities of hiring community residents, which caused worries amongst the stakeholders. These situations created dissatisfaction and local frustrations, which undermined the smooth operation of works (Kwon et al., 2014). The failure to hire community artisan during the construction of the toll roads resulted to frustrations at the local level, especially considering that unemployment that was already very high in the neighbourhoods still persists.

6.4.3.2 Improving local flooding and drainage works:

Over the years, large-scale of flooding have been recorded in United Kingdom, Mexico, Australia, United State, Thailand and Brazil (Pedrozo-Acuna et al., 2017). The magnitudes observed from these hydro-meteorological activities proofs their ability to cause greater damages to the humanity (end-users stakeholders), exposing the high levels of all built infrastructure (Pedrozo-Acuna et al., 2014). For road infrastructure, high water levels and floods can considerably affect both the lifetime and performance of community stakeholders, as these actions encourage the number of occurrences such as roads being washed away, landslips, submerged and inundated bridge supports, landslides and road closures (Zumrawi, 2016). Hence, ensuring the safety and reliability of existing structure (such as roadways) is essential to alleviate the effect of these menaces. Though climate circumstances are usually considered when planning transport infrastructure schemes (e.g. road drainage), most of the drainage structures such as bridges, culverts and trenches lack

the competence to deal with the present frequency of life-threatening flows along the project route (Pedrozo-Acuna et al., 2014). Lekki-Epe expressway is an essential route for transportation of people (end-users stakeholders) and goods that facilitate communication among other communities, towns and cities which happens to be a victim of such circumstance. The significance of this infrastructure necessitates its robustness to endure the strains from diversity of weather related risks (Lwin et al., 2014). Upgrading of road normally causes some temporary changes in drainage systems during construction phase, particularly where culverts are yet to be replaced or installed (Zumrawi, 2016). The existing drainage path of the two considered project arena were narrow and upgrading works involved extending the cross-section on both side of the road which really hampered the movement of community stakeholders. Some of the factors that induced roadway floods can be categorized into social (human related effects) or natural (rainfall), predominantly heavy rainstorm which is the major cause that trigger and magnify the rare presence of water on road network (Ou-Yang et al., 2014) or the dangerous points where the road crosses the usual drainage network of a watershed. Such circumstances end in impoundments that are possible to cause seepage in transportation embankments, and therefore resulting in harming the road (Polemio and Lollino, 2011), not to comment on the costs related to the refurbishment of the damaged pavement infrastructure which is greater than the overall expenses of maintaining drainage facilities adequately.

Most of the installations of culverts were done in the dry season which made it possible to reduce the risk of sedimentation to local springs and wells that provide water to community residents, but some residents still found their water contaminated because of some complications during installations (Neal et al., 2012). Intense climate events' (flooding) that causes economic losses can be reduced using methods that will assure highway safety to their occurrence and reducing indirect risks related to disruptions in the highways services (Pedrozo-Acuna et al., 2017). Developing flood patterns or impoundments prior to any tragedy can yield significant data concerning road costs and vulnerability involved (Kalantari and Folkeson, 2013). During the preparation of watercourse diversions, all runoff and silt-laden water should be discharged to a sediment control pond when necessary. The construction works predicted the widening and rising of existing embankment in swamps by placing rock fill foundation which magnified the condition of flooding along the project neighbourhoods (Lwin et al., 2014). The

modification measures that were carried out including heavy vegetation clearance and confining it added to the community drainage problem during construction stage.

6.4.3.3 Repair of minor local roads:

The principal assets of any country worldwide are well constructed roads (Schraven et al., 2012). Well-maintained and efficient infrastructure systems are very important for communal stability, environmental sustainability and for promoting economic development (Mikolaj et al., 2012). Several models and systems of repairs generally known as Pavement Management Systems (PMS) are being established in order to guarantee authentic management of local road network (Kenley and Harfield, 2014). The main objective of managing local minor roads is to obtain positive results in road asset accountability in order to benefit the end-user stakehoders of the area. At all level of road network, the establishment of standards road surface involves much more detailed information regarding pavement structure assessment such as overlay thickness and residual service life, which are the basic factors for deciding whether reconstruction, rehabilitation or maintenance arrangements is suitable (Schraven et al., 2011). Local roads are exposed to the fundamentals and the effects of bad weather which can be sharp change, malicious and even reasonably than predicting long-term effect. If the road is well planned, it will allow development within the community to be more programming, realistic and schedule (Bosher, 2014). Therefore, local minor roads within the communities of the PPP project were not observed from an adaptive exposed system perception bearing in mind recovery issues for end-users stakeholders and the community. Previous practice has shown that local communities have the tendency of using the road reserve for important places like market, beaches and other recreational areas. This happened when development become necessary for community stakeholders (Kenley and Harfield, 2014). Managing road assets must also consider unanticipated effects of the natural environment such as severe weather occurrence. Consequently, local effects are measured in relation to the repair durability and their skills, as well as community pricing conditions e.g., market expenses charged by contractors of the repair activities.

Development of minor roads within the community involved change of road geometry, including reduction of sharp horizontal curves, installation of speed bumps and improvement of sight distance, but noting of such happened along the studied areas

(Hassler and Kohler, 2014). Hence, the main concerns were not established, these concerns include: cost effectiveness, magnitude, functional categorization of road communications, severity of pavement distresses, black spots and extreme traffic volume. If all these concerns were addressed it will resulted to reduction in the rates of accident during and after construction (Bigg, 21012). End-users stakeholders' usage, such as vehicular traffic can be evaluated, construction standards and varying safety can also be included into maintenance desires. Although, the only missing story is that statistical analysis data on road use are not recognized (Taggart et al., 2014). The missing ideas are the cumulative essential natural occurrences, effect of severe weather events and the wear and tear. The repair of local roads further developed local trade and small businesses, owing to improved road transportation, by facilitating distribution of products to various part of the community along the project area (Kenley, 2014). The repairs should have inspired the arrival of migrant workers into the project area, which can provide framework for businesses with the local inhabitants (Rouse and Chiu, 2009) but that significant opportunities are not available. Again the repairs can also provide a nucleus for a new settlement and unstructured development along the length of the road project. By and large, apart from the main road that was upgraded with the advent of PPP, the local minor roads that supposed to be an enabling access to social services like schools, markets and modern health facilities which are beneficial to the community stakeholders were not prioritised. Also, school children that were expected to benefit from the infrastructure facility were denied prompt arrival to their various schools.

6.4.3.4 Giving incentives to local residents during road work:

Investigation has usually shown that introducing incentives in project neighbourhood increases the level of local infrastructure benefit (Luo et al., 2010; Martinez-Bravo et al., 2011; Wong et al., 2013; Martinez- Bravo et al., 2014). Although, no study has observed whether or not, the introduction of incentives has developed the value of local infrastructure projects. The plans for giving incentives to local residents needed evaluation and monitoring indicators for gauging implementation performance, outcomes and impacts on the community stakeholders during construction of PPP road arrangement (Mu et al., 2011). Opportunity to good roads also assists to lessen household consumption, rural poverty, raise school enrolment and improve access to off-farm employment (Dercon et al., 2009; Khandker et al., 2009; Yamauchi et al., 2009; Gibson and Olivia, 2010; Qiao

et al., 2014; Gonzalez-Navarro and Quintana-Domeque, 2016). Thus the range of additional ecological and social impacts should be unlimited during construction works in the project area. This study has established that the project company prolonged interruption of services such as in the case of school wall that was demolished, the contractor refused to construct the walls on time causing dust, noise and disturbance of lessons during school activities. Although, in most developing nations the value of local infrastructure projects are still underprivileged (Gibson and Olivia, 2010; Qiao et al., 2014) Assumed the on-going hard work in most developing nations is to encourage self-governance at the local communal level, it is normal to ask whether and how the execution of local governance restructurings affects the value of local infrastructure projects.

Likewise on water pollution, the contractor refused to provide new water tanks and water kiosks for the affected stakeholders within the neighbourhood of the project most especially in Lekki-Epe axis during construction. Overhead pedestrian bridges are not available for end-users stakeholders to cross at appropriate locations. Appropriate programs were not fulfilled when the school children were not protected from the heavy machine and trucks moving along the project area. In this regards, community leaders should rise up to the challenges, for instance in getting financial support from the government and contractor in order to manage the project works (Wong et al., 2013). As such, the community governance arrangement, which was expected to affect the choice of indigenous leaders and the incentives and responsibility system those leaders encountered, eventually affected the quality of community infrastructure projects (Zhang et al., 2006; Wong et al., 2013). Finally, as the governments usually make available partial financial support for these road projects, community leaders frequently needed to lobby for financial contributions and labour inputs for the stakeholders in the project neighbourhoods (Martinez- Bravo et al., 2014). Hence, the community governance system (which dictates the incentives, selection, and responsibility system of the community leaders) does not significantly affect the quality of community infrastructure facilities along the neighbourhoods of the project.

6.4.4 Environmental Impact

6.4.4.1 Avoid damaging of (or replacing damaged) natural habitats:

Roads construction is a fundamental fragment of modern transportation networks and considerable effort has been done to develop systems that will produce low-cost road alignments through ideal environment that will integrate several genuine features and limitations (Kang et al., 2012). Nevertheless, roads constructions also affect neighbourhood wildlife inhabitants (Jones et al., 2014; Friedrich, 2015) and in specific circumstances, these effects are the determining factors in final road design selection (Kang et al., 2012). Hence, it is essential to accurately justify for these ecological impacts during the optimisation process of road alignment. Likewise, ecological representations can justify for several negative effects of roads construction, they presently emphasis only on overall policy recommendations or existing roads (Friedrich, 2015). As animal inhabitants can be extremely thoughtful to the definite route taken by a road, it is respected that these ecological representations be integrated during design of a new roadway. This will permit road designers to ascertain original alignments as much as preserving the protracted period of ecological sustainability of new roads along the project area (Mondal et al., 2015). Several machineries and vehicles that were used during construction at various stages (such as jack-hammers, pay loaders, tippers, bitumen sprayer, graders, excavators and so no) damaged natural habitat along the neighbourhoods of the project routes, also water ponds, mangroves, fish ponds, poultries among others were also affected (Li et al., 2016). Despite the fact the road construction projects can improve traffic and reasonable issues in society; they can also damage enormous areas of cultural artefacts and natural habitat and put increasing pressure on community infrastructure such houses, schools, markets and offices (Maji and Jha, 2012). The water pollution caused by the oil that was drained from the earthmoving equipment during the PPP projects resulted to further degradation through percolation and infiltration in the earth surface endangering the quality water expected to be useful for community stakeholders within the vicinity of the project areas. Majority of these impacts are factual, but others are professed and they both need to be managed efficiently in order to avoid community disputes that can lead to social damages amongst the host communities, negative cost impacts and project delays (Hare et al., 2014). Special considerations were not given to water abstraction areas along the project routes, where leakages of oils and diesels are supported in polluting water meant for human and animal consumptions (Mishra et al., 2014). Accessibility of

groundwater resources arose easily in the communities and villages along the project neighbourhoods.

This was evidenced by the presence of shallow wells in most of the communities and villages along the project neighbourhoods. There was little or no forest along the project routes which had no inhabitant for wildlife species. The new environment exerted new pressure on fauna and flora along the project neighbourhoods. These developments also attracted a large number of flora operators to the area, which contributed to the rich art and culture gallery (Van Troost et al., 2013; Hewitt, 2016; Wong et al., 2016). The contributions of traditional ruling classes along Lekki-Epe neighbourhood were unable to protect the habitat of affected stakeholders during construction. The sensitization of community stakeholders to resource protection and the reinforcement of supervision with adequate logistics were hampered in an attempt to engage this proscribed activity (Joseph et al., 2014). To avoid all these hypothetical damaging impacts of the community natural habitat and to quickly harness the possibility values of end-users stakeholders in realising success of the project, more research becomes necessary in order to understand the factors that can sustain and shape the community stakeholders when such occasion arises.

6.4.4.2 Avoiding local water pollution:

The growth and construction plan of communities and major economic areas should be incorporated and harmonized with the environmental plan; the zoning of medium and large communities must be functional, environmental management guide, complete overhauling and control of built-up environment should be made available; thoughtful management of the quality of the environment and the quantitative inspection of environmental security work should also commence in order to change the qualitative to quantitative management (Lu et al., 2015). Residue is the most substantial pollutant from construction site as it could possibly disturb all the three scopes of sustainability such as social, environment and economic concurrently (Ab Rahman et al., 2010). The developed structure and the economic layout of the project area should be accustomed according to assets, environmental capacity and source of energy (Ahmad et al., 2014). The level of sediments emanated from construction site is huge, which normally released to water bodies or occupies the whole land (Jeffress et al., 2011). Sediments control facilities and the uses of structurally based erosion are commonly used to reduce the danger of water

pollution from construction site (Teng et al., 2011). The water level of the entire project routes are very high, although the normal operations of the road construction was not expected to impend resources but the damage of the herbaceous shield following the development of construction sites had affected the surface water regime of the project communities (Armah et al., 2013). The water pollution can be avoided by erecting and installation of control facilities such as dewatering, contour drain, silt fence; flocculation and retention ponds (Al-Ani et al., 2014; Ahmad et al., 2014). Various studies have been established to buttress the effectiveness of those control facilities.

Restriction on retention times was noticed during construction following the increased in the runoff coefficients. The quality of surface water within the host communities were deteriorated as a result of an increase in the runoff of storm waters loaded with sediments. This influences the risks of quality water (due to pollution as a result of discharge of pollutants and waste water), river sedimentation, soil erosion, stagnation of water in borrow sites, landslides, silting of soils, contamination of the water points used by stakeholders (McPhee and Aird, 2013). The use of control facilities does not even guarantee the source of pollution instead of addressing the source of the problem. The justification strategies are also unable to assure the quality of water that has flown into the natural water routes (Apipattanavis et al., 2010). Although deeper aquifers are comparatively protected from pollution actions along the project areas, the Coastal plains sands unit is under significant threat from community stakeholders' activities which alter recharge patterns, including draining of marshes and swamps, over-extraction from wells and at times diversion of runoffs (Belayutham and Gonzalez, 2013). During construction, contractors are ignorant of the magnitudes of their construction programmes and implementation on the problems of sediment and erosion when it occurs (Belayutham et al., 2016). Their usual practice during construction is to clear the whole project areas in order to ease the movement of vehicles, equipment and work. Nevertheless, the entire site clearance also aggravates the danger of terrible erosion and sediment assemblage which can be subjected to enormous disturbance when rain falls (Yang and Wang, 2010). Therefore, the basic fundamentals of construction planning prearranged to realize the following conservative objectives (quality, time and cost) may have negative concerns over other features such as sediments and erosion (Beighley et al., 2010). It should, however, be noted that this type of project which had expansion of the existing roadway does not traverse or come closer to any major water sources. This consequence coupled

with the opening up of hill areas along the toll road for settlement as a result of upgrading of the road may result to greater amounts of runoff flowing into the low lying areas affecting the community stakeholders in terms of contaminated drinking water.

6.4.4.3 Noise level and air pollution:

An incessant development in vehicular traffic in several years back has necessitated the construction of extension of existing roads or new road to improve upgraded transportation systems in Nigeria (Babatunde et al., 2016). However, much research has shown influences of either noise or ambient air pollution on health (Basner et al., 2014; WHO, 2013), insufficient studies have examined the two environmental experiences together. The growth of an environmentally and competent sound transportation network has presume much better significance in Nigeria in the mission to realize excellent urban life of end-users stakeholders of a community (Opawole and Jagboro, 2016). Although, for efficient avoidance of health risk it is essential to know whether environmental experiences are influencing health outcomes autonomously, and whether impacts of noise and air pollution are co-operative or even protective specifically because of their happening concurrently (Foraster, 2013). Evaluating the environmental effects of such mammoth developmental projects would assist to determine the greater environmental stability and objectives of improved safety for the current and upcoming stakeholders of the community (Chen et al., 2017). Intellectual utility happens to be one of the results that were proposed when traffic noise and air pollution affects any stakeholders (Basner et al., 2014; Block et al., 2012). Air pollution and noise level are the most dangerous impacts that could be expressed during project operation. These are expected and are unavoidable especially during the construction phase of the project even after construction. The environmental effects due to road construction are provisional in nature and these would affect the community stakeholders along the project arena (Prince et al., 2013; Duarte et al., 2015). Such effects are affected due to various road construction activities and movement of earthmoving equipment.

Although, huge environmental effect would linger due to cumulative vehicular traffic even after the road is exposed to traffic after completion Guxens and Sunver, 2012). The fact that the road has become bigger and wider encourages an increase in the numbers of vehicle plying the route. By extension, there will be greater vehicular emission and the

related environmental impacts, in the form of hydrocarbons, NO2, SO2 and CO. The various vehicles and machinery that were used during the various stages of construction and site restoration emitted various gaseous pollutants such as NO2, SO2, CO, etc. (Clark et al., 2012; van Kempen et al., 2012) which had serious negative effects on air quality of that was inhaled by the community stakeholders along the neighbourhood of the project. The noise that was generated during construction activities (including cutting and compaction), movement of construction trucks and equipment and increased volume of traffic ardently increased the level of noise and vibrations along the project neighbourhood (Clark et al., 2012). Ambient noise levels were also elevated by these activities. This engineered the damaged ambient air conditions along the project neighbourhood. Likewise, the thriving of cars, trucks and trailers lead to an elevation of ambient noise levels in the direct neighbourhood of the project area. Some of these attitudes are beyond the control of the project company, since they cannot control the types of vehicles that will ply the roads they build (Tzivian et al., 2014). Only government can control the effect of noise through enact law because end-user in Nigeria are prone to using horn while driving even if nothing is obstructing their movement. The level of dust pollution reduced drastically after completion of the road. Also the emission rates of combustion gases of vehicles increases with fluidization of traffic due to the influx of vehicles plying the route. Toll road development will definitely increase noise and vibrations due to the fact that gravel and loose soil coupled with bituminous asphalt generate noise and odour that will not be suitable for stakeholders living in the neighbourhood of the project.

6.4.5 Public Utilities Compensation

6.4.5.1 Providing water wells for affected communities:

Adequate quality amount of well water must be provided for community stakeholders if their infrastructure is hampered. It is occasionally not possible and even not economical to provide water for all affected stakeholder. In some areas, location of water might be scare and only through management and good organisation of community stakeholders can resolve the agitation (Sandford and Pope, 2013; Han et al., 2014). The speedy growth of community centres in Nigeria has generated huge poverty in which stakeholders are extremely exposed to calamities. Toll road project should be construed as a development

project that will focus not only infrastructural benefits, but also supporting the rehabilitation of socio-economic infrastructure (accessibility to roads, markets, schools, health centres, places of worship, and building or repair of drill holes and wells; etc.) of the communities along the project routes (Fishman, 2012). The aims of providing water for the community stakeholders should not be restricted to thirst but also to guarantee other domestic usage and environmental sustainability (Ramey et al., 2013). Standard of providing quality water are seen as a problem for the contractor in charge of the community project. Provision of centralised water schemes in all the towns along the project route can be adopted, but they are more insubstantial and complex to manage than the modest technologies of borehole engaged in host community (Pinera, 2012). Some of the borehole that was sunk along the project route is disrupted due to construction works. The ones that were located along the roadway required some replacement but not provided. Hence, it was recommended that the result of relief operations must be improved and they should be planned in such a manner that instantaneous support must be available, thereby connecting the ideas of development and relief together (Shearer et al., 2011). These amenities usually reserved for community use are in most cases not enough in number to meet the needs of the stakeholders, as verified by the long queues of women found around wells in some villages along the project route (Bonte et al., 2013). To address these issues, the company should have provided alternative boreholes, which after the works will revert to community stakeholders for their use when appropriate.

6.4.6 Integration with the Host Community

6.4.6.1 Involvement of community leaders in key decisions:

The role player by the community leaders in liaising, managing and engaging multiple stakeholders cannot be overemphasised. Active leadership is the soul of resourceful stakeholder engagement and organisation in project delivery (Baroudi and Rapp, 2014). Managing stakeholders effectively becomes more crucial and serious in crisis circumstances compared to orthodox projects (Hidayat and Egbu, 2010). The involvement of Community leaders is critical to the success of any PPP toll road project. The socio-economic surveys (village surveys, household surveys) conducted among village leaders and household leaders of diverse social classes assisted to ascertain their level of

involvement, opinions, expectations and concerns during the road construction (Olcott and Oliver, 2014). Confidence comes from active community leadership which is important to give stakeholders a harmless environment where they can share their views, concerns and reservations (Healey et al., 2011; Nakagawa and Shaw, 2004). Real leadership is seen as major social capital transformation (Dhillon, 2009) and connecting provision of services with the stakeholders need in planning and delivery of the road construction (Olshansky et al., 2006). With regards to the Lekki-Epe Express toll Road Concession, the Lagos State Government did not carry Community leaders along. Review of the background check through interview shows that the village leaders and opinion leaders in the neighbourhood of the project were absolutely left out in the conception phase (Baroudi and Rapp, 2014). The practical and compassionate skills are very essential in achieving project objectives and also collaboration and communicating with stakeholders are vital instruments for sustainable development.

Community leaders who display real leadership are capable of managing and supporting all the needs of relevant stakeholders in the community as well as achieving the objectives of the road projects within the socio community environment within the location of the project (Yin, 2014). Community participation and consultations that supposed to be the brain behind the success of PPP toll road initiatives were not established along Lekki-Epe toll road project. The opinion of the community leaders was not sought thereby making it difficult to get the necessary support during the successive phases of the project (Murray et al., 2015). Consequent isolation of most of the community leaders resulted to difficulties and limitation of means of communication among the stakeholders (Ghaderi and Henderson, 2013). The role of community leaders like village heads, chiefs and Baale's along the corridor of any PPP project cannot be overlooked in Nigeria (Babatunde et al., 2016). Disregarding the influence of community leaders resulted to stakeholder's agitation. Most suggestions from stakeholders should be reckoned with because of the internal relationship between them and community leaders (Barratt et al., 2011). Involving community leaders in key decisions at the conception phase of the project tends to have influence on the members of the community stakeholders and can easily communicate government intention back to the stakeholders since they are nearer to them than the government.

6.4.6.2 Involvement of Residents in key decisions:

Good road has rendered an increasing importance to residents support for infrastructure development (Andriotis, 2004; Gursoy and Rutherford, 2004). This also expose that the likelihood of achieving residents support for toll road construction is subjective to residents behaviour (Gursoy et al., 2002; Teye, et al., 2002). The involvement of residents in road construction would definitely generate social and economic benefits which will influence their behaviour towards successful delivery (Fredline and Faulkner, 2000). The residents are stakeholders of the community in which the project situates. They are very important in any form of PPP arrangements. They are major end-users of the toll road project as well as custodian of any infrastructural facilities along the project route (Haughton et al., 2015). Official planning for resident's engagement has become imperative because they are seen as full associates rather than delegations in road construction industry (White et al., 2010). Review of the background check through interview shows that they are completely marginalized from the inception of the project. Their absence from the project program resulted into conflicts and acrimonies that almost jeopardised the chances of achieving success in the project plan (Oyedele, 2012). However, assistance from practitioners on how resident's ideas can and should be incorporated into infrastructure development programmes, and the benefit it can provide, is underutilized (Voinov and Bousquet, 2010). During each of the organised meetings between the residents, state government and project company, the contents of the program, in terms of economic, social, cultural, and environmental challenges, as well as mitigation and optimisation measures were not clearly presented to the groups that represented the stakeholders (Barreteau et al., 2010). This process led to litigation and court actions between the residents and state government, asking the government to stay actions on the commencement collection of toll charges (Oyebanji et al., 2011). However, after several demonstrations by the residents, the Lagos State Government announced the indefinite suspension of toll collection on the road. Some of the stakeholder groups requested the government to discontinue the contract and pay the project company off. The State Government due to the agitation reverted to the collection of tolls on the road and paid shadow tolls to the project company over the remaining period of the concession (Babatunde et al., 2016). As an alternative, the instance for resident's participation in road construction should be fully supported by complete appraisal of the degree to which

participatory strategies provide beneficial results for road project decision-making procedures.

6.4.6.3 Involvement of private firms within the community in key decisions:

Projects to nurture private firm's involvement should be designed and executed through international technical support with a fluctuating prominence on training, financial and assistance in order to develop road construction industry (Giang and Pheng, 2011). The construction industry has been recognized over the years as one of the four leading economic sectors in terms of intercity linkages (Isa et al., 2013). They have accomplished several grades of success when appraised against one other and their unique purposes. To underscore the significance of private firm's involvement in PPPs road project at the initial stage of the project is inevitable (Renard, 2011). Therefore, significant developments in the corporate neighbourhood have brought mammoth commercial opportunities in the wake of transformations (Bala, 2003). Despite the fact that community residents has not been witnessing the community involvement, the private firms must not be short-changed in participating in the gigantic prohibitive infrastructure in Nigeria which will continue to be a welcome development in PPP transformation schemes (Izuchukwu et al., 2014). The Lagos State Government and the project company ought to have consulted with the private firms as well as seek advice before initiating the setting up of toll gates along the expressway.

Although, it may be argued that the agitations against the toll road Project were inspired politically this should not be an excuse not to have involved the private firms in the project from the conception phase (Foster and Pushack, 20011). However, adequate service delivery, partnership, entrepreneurship and localization planning with access to funding still make the project company relevant to the private firm and community at large (Aminu, 2011; Osakwe, 2012). This also led to the assertions that the bidding process of the concession was shady. Lack of honesty and transparency in the execution of PPP toll road project resulted to lack of private firms support (Chao, 2010). Although, the idea behind the Lekki-Epe toll road project was fantastic but the method at which the project was organised without private firm's involvement at the initial stage leaves much anticipation. Another feared risk was related to the buildings of private firms that were demolished during construction (particularly the car lots and fuel stations) along the

intervention areas (Babatunde and Low, 2013), which reduced the business patronage and economic activities along the toll road.

6.4.7 Integration with Political Groups

6.4.7.1 Involvement of royal fathers in key decisions:

Royal fathers are being called upon to be accountable for the behaviours of community stakeholders, their operations and influence within the neighbourhood (van Marreeijk and Were, 2003). They are also being requested to use sustainability ideas in dealing with community stakeholders. Sustainability in this aspect refers to the civil service, usually considered voluntary, establishing inclusion of environmental and social apprehensions on infrastructure facilities and in communications with community stakeholders (McCauley's et al., 2004). Royal fathers are meant to inspire and integrate sustainability ideologies with an answer that will address both morals and economic objectives of community stakeholders. They must be able to influence the community's views of success from an established economic capacity to a sustainable based capacity (Salzman et al., 2005). Several royal fathers along the project route have control on their stakeholders. Majority of the affected community are Yoruba speaking tribe, where customs and traditions are very important. The idea of empowerment is unclear and contentious which includes not only control over others, but also the power of an individual or community to achieve something for themselves and others (Willard, 2002). With reverence to community growth, empowerment can also be referred to the ability to compel contractors in order to implement development plans, such as improving the quality life of stakeholders (Doppelt, 2003). A royal father who pleaded anonymity said that the project development program had many flaws. According to him, there was no proper consultation with the royal fathers along the project community before the project was embarked upon (Izuchukwu et al., 2014).

The very obvious about the shoddy involvement was that only a section of royal fathers were carried along while others were ignored because of their status. This amounts to unfair treatment and injustice which later broke into fracas between the slighted royal fathers, their community stakeholders and government (Babatunde and Low, 2013). In the cause of this imbroglio, interest groups fomented troubles at various stages of the

construction activities. The basis of their resistance was the callous way of neglecting their royal fathers and even punishing the end-uses stakeholders of the community (Osakwe, 2012). The few royal fathers that were involved were unable to come out to resist the agitation of community stakeholders.

6.4.7.2 Involvement of Women leaders in key decisions:

Over the recent years the numbers of occupations available for women has progressively increased, but these does not involve trained jobs in the construction organisation (Powell and Sang, 2015). In Nigeria, as in other developing countries, demand for employment is high; priority is given to procedures of incorporation. As a consequence of the universal financial crisis the construction sector experienced the greatest slump in Nigeria's recent history. In the current condition, fighting discrimination against women and their access to the construction sector is no longer a priority for contractors, who are not concerned with the problem of extremely high unemployment (Saavedra et al., 2014). However, the matter is no longer a news, the fact that there are businesses that are occupied completely by men which continues to be a general problem, not only because it obviously involves discrimination, but also because it is connected to problems such as ruthless working conditions, neglect for safety and low reputation of certain businesses (Ibanez and Narocki, 2012).Women constituted a larger part of the population along the project community, and they held almost 50% of the informal sector (Izuchukwu et al., 2014). Obstacles encountered by women in the construction industry have been evaluated from several points of view and in different countries perspectives (Whittock, 2002). Menches and Abraham (2007) reviewed over 20 academic papers learning about women in the construction industry and give emphasis to barriers associated to an openly masculine principles, an unruly behaviour also stressed by Agapiou, 2002, concerning workers in Nigeria.

Food productions in the area are mostly produced by women and are predominantly active in the following areas: food processing (peanuts, cassava into gari, yams and yam flour), market gardening, fishing and processing of fishery products (drying and smoking), handicraft, livestock and trade (Babatunde and Low, 2013). The women have formed several functioning groups and associations (Wright, 2016). Because of their economic accomplishments in particular production distribution, they are visible to the

inconveniences caused by traffic on the toll road, notably along Lekki- Epe expressway. The main difficulties facing women, especially those in the project area, include insufficient social and economic infrastructure (Romain Onsalo et al., 2013). Women participated strongly in the entire crusade against the marginalization of end-users stakeholders along the project route which stemmed from the free movement of goods and services (Powell and Sang, 2015). The majority of active women are market women fully controlled by Iyaloja who happens to be the women leader. At the advent of the toll road project, the project company with the support of the state government goofed not to have involved the women leader into their curricular. As a result of this prolonged absence of women leader (Martin and Barnard, 2013), the dislocation of support from the community stakeholder who are mainly women sustained the symbiotic agitation with the remaining stakeholders who are men.

6.4.7.3 Involvement of Religious leaders in key decisions:

Although, religious centres have progressively turned out to be a motivation midpoint for communication, social and avenue of passing messages to Almighty God (Dana, 2010). Bond between religious orientation, economic development and business behaviour remains unclear partly due to the complication of underlying communications for the community stakeholders (Gartner, 2006). Going through historical interpretations of the careers and early lives of religious leaders, they always demonstrate respective stature of powers through unique forms of life activities (Ligon et al., 2008). Despite the fact that bond between religious leaders and community stakeholders have received attention in the literature (Dana, 2010; Candland, 2001), unambiguously concentrated on the effects of religion on the environmental development. The social acceptability of a community project depends on the potential impact on the end-users stakeholders of that particular community. The influence of religious leaders on community stakeholders cannot be ignored due to their spiritual capabilities and better communications among local communities which therefore have further opportunity in appraising their morals and personality (Hunter et al., 2007). Religious leaders are those personalities who have had a noticeable influence on their organisations (stakeholders) and on the comprehensive social structure. Stakeholders, whether religious, cultural or social, in a community are likely to create business connections and opportunities through any means available, sometimes

from religious leaders (Jack et al., 2008). Religious leaders are seen to play a contributing role amongst the community stakeholders in business enterprise. This could have been an opportunity for the project company to seek for assistance from the religious leaders but could not due to the lackadaisical attitude melted on the leaders during the construction stage of the project which deprived them from communication (Cope et al., 2007). Some religious places are affected by the development without receiving any form of compensation. There are no forms of consultation and sensitization before the commencement of the project along the community with any detailed resettlement and compensation plans for the affected religious places.

6.5 Evaluating the end-user stakeholders needs along the project route

Evaluating end-user stakeholders' needs is justifiable for any successful implementation of any PPP road project. The bedrock of end-user stakeholders needs are infrastructure combined with social inclusion and equity, productivity, environmental sustainability and quality of life (UN-Habitat, 2013). The prosperity of millions of end-user stakeholders along the project routes depends on the economoic prospects on developed infrastructures that were put in place for end-user stakeholder's use. Evaluating the analysed data for end users stakeholders needs along the project routes requires grouping which was identified from literature and professionals opinion in achieving the desired objectives of the research. Private sector handling the PPP road project should endeavour to communicate and discuss with end-user stakeholders involving corporate stakeholders and entire community the fundamental principle of PPP (Jones et al., 2013). This will create an enabling environment for the private investor and synergise the mutual relationship along the project route.

The presented and analysed results were assessed, and the reliability for the required statistical tests were checked using factor analysis to determine the cronbach alpha of the data set and also testing KMO and Bartlett for competency and suitability of samples. This method was used to determine if the variables of the questionnaire survey consistently reflect the construct it is meant to measure (Field, 2013). George and Malley, (2003)

recommended 0.7 as the lowest acceptable score for internal consistency for coefficient of Cronbach's alpha while 0.8 was described as a sign of good internal consistency. The overall Cronbach's alpha coefficient test results gotten from SPSS for this study is 0.882 which is more than 0.8 required as good internal consistency which was run for the 33 variables portraying worthy consistency for the data used (see table 5.15). The overall reliability of the data will increase if variable with higher value is deleted (Field, 2009). This shows that those variables representing royalties for indigenes (compensation); compensation of electricity for removal of electric poles and overhead cables; avoiding displacement and killing of wildlife and endangered speeches; reduction of impact to cultural sites and contractor should contribute to the improvement of security in the host community as construction works lead to security risk contributed positively to these groups of reliability (see table 5.15).

Selection of underlying factor using minimum Eigenvalue of 1 with aid of SPSS in extracting 9 factors with the methods of 'principal component' method and 'direct oblimin' oblique rotations converged at a value of 50 iterations. Kaiser (1960) proposed that the number of factors to rotate is the eigenvalues-greater-than-one. The underlying principle behind this is that eigenvalue less than one indicates that the scores on the component would have negative reliability (Cliff, 1988).

The initial application of four different extraction methods and scree plot were used in deciding extracted of 9 factors. Values generated from the results for KMO and Bartlett tests of sphericity are 0.793 (above 0.5) and 0.0003649747 (less than 0.05) respectively as shown in Table 5.17. The closer the KMO value to one, the more the appropriate the use of factor analysis (Pallant, 2013). Total variance of 62.581% of extracted factors was recorded showing good percentage of representation for analysed factors (see table 5.18). Child (2006) established that questionnaire variable with a factor loading of +0.3 and above or -0.3 and below were considered as part of the offspring of their principal factor. This research shows no traces of such amongst the questionnaire variables that were presented (see table 5.19). The development process of end-users stakeholders' management for the prescribed PPP toll roads will depend on the extracted factors gotten from the analysed factors (see table 5.19). Any questionnaire variable that loaded considerably on more than one extracted factor will be totally exempted (Tabachnick and

Fidell 2007). In that case involvement of Youth leaders in key decisions was affected and not considered as part of the need of end-user stakeholders along the project routes.

Out of all the nine (9) extracted factors, seven (7) contributing factors were finally used for analysing end-user stakeholders' necessities with safety efforts by the contractor having the highest percentage of variance and eigenvalue of 23.521% and 7.762 respectively showing six (6) contributing variables offspring which involves putting proper road work signage in place to increase safety; installation of speed limiting devices on alternative routes during construction; making provisions for crossing structures (Pedestrian Bridges); create special crossings for school children; effort to reduce cement and other types of dust and increase restriction efforts to construction site so as to increase safety which are all extracted factors from the analysis (see Table 5.19). The socio-economic impact has percentage of variance 8.850% and eigenvalue of 2.921 respectively showing seven (7) contributing variables offspring that involves choice of route for physical effect (demolition of buildings); provision of alternative route during construction to ease traffic; reduction of disruption of community access; make efforts to stop increase in cost of living and provide basic infrastructure; consideration of the community on road blocks timings; compensations to affected building and adjacent areas; and travel time during construction which are extracted from the analysed factors (see Table 5.19). The benefit realization and community participation has percentage of variance 5.694% and eigenvalue of 1.879 respectively with one out of the five (5) variables offspring not contributing. The contributed offsprings factors are creating jobs for residents; improving local flooding and drainage works; repair of minor local roads and giving incentives to local residents during road work. The non-contributing variable was written in italics (see Table 5.19). The environmental impact is the fifth extracted variables having 4.414% percentage variance and 1.457 of eigenvalue respectively with one out of the four (4) variables offspring not contributing. The contributed offsprings factors are avoid damaging of (or replacing damaged) natural habitats; avoiding local water pollution; and noise level and air pollution.The non-contributing offspring is written in italics (seeTable 5.19). Public utilities compensation is another factor amongst the variables with one of the two offsprings not contributing and is described in italics having percentage variance of 4.046% and eigenvalue of 1.335 respectively (see Table 5.19). The only contributed offspring variable is providing water wells for affected communities. Integration with host community has four (4) variables offspring with one out the four not

contributing because it loaded twice which was underlined and written in italics (see Table 5.19); the percentange of variance is 3.881% and eigenvalue of 1.281 respectively. The contributed offspring are involvement of community leaders in key decisions; involvement of Residents in key decisions; and involvement of private firms within the community in key decisions. Integration with political groups has a replica of the other variable of integration with the host community having differences in percentage variance 3.579% and eigenvalue of 1.181 respectively. The contributed offsprings are involvement of royal fathers in key decisions**;** involvement of royal fathers in key decisions and involvement of religious leaders in key decisions.

6.6 Framework for Managing End-Users Stakeholders Participation in PPP arrangement Program

This framework establishes the dynamic methods that should be taken in engaging end-users stakeholders during any form of PPP arrangement most especially toll roads project. The framework is proposed to achieve equilibrium interests of end-user stakeholders of any toll road project involving active responsibilities of private investor. Oyewunmi et al., (2017) established that end-user stakeholders are paramount in any PPP construction project. Both primary and secondary stakeholders must be informed and engaged at the inception /stage of any construction project (Babatunde et al., 2016). These policies are in line with the Government's obligation in terms of accountability and transparency, which must ensure that the transfer of duty to the private sectors follows the utmost international practice (Opawole and Jagboro, 2016) that is practicable for use. Establishing a robust PPP framework, a healthy arrangement must be provided for both private and public sector supplementing one another in terms of shared risks and benefits, organisational arrangement and communal harmonisation (Babatunde et al., 2016). Auzzir et al., (2014) iterated in his research that private sectors role in PPP plan are to provide complementary value to available services made by the public sectors (end-user stakeholders). This will validate the insufficiencies of end-user stakeholders along the project route with perceived aptitudes in terms expertise, finance and operational control. End-user stakeholders must be provided facilities and infrastructure to enhance the quality of their livelihood along the route in which any project (Freeman and Moutchnik, 2013). The end-users stakeholders'

worries concerning the development and participating in PPP road project is inevitable. Therefore, the study aimed in getting a framework that will encapsulate the life cycle of expected infrastructures to be made available for both Lekki-Epe and Apakun Muritala Muhammed end-user stakeholders from inception to operation stages as reflected in previous chapters. It was previously observed from that 7 factors were extracted from the principal component method of factor extraction which was used to design the final framework as a tool in engaging end-users stakeholders' marginalization along the prescribed PPP toll road project (see figure 5.4). Some of the expected factors for managing end-users stakeholders for a PPP road projects is discussed as follows:

- Socio-economic impact involving choice of route for physical effect which can affect demolition of building; provision of alternative route during construction to ease traffic for the end-user stakeholders along the project route; reduction of disruption of community access in the neighbourhood of the project; efforts of stopping increasing cost of living during construction; considering the end-user stakeholders on road blockage during construction; end-user stakeholders along the project routes needed to be compensated on their affected properties and considering the travel time of end-user stakeholders during construction.

Social constructed variables qualities of end-user stakeholders have been categorised as power, legitimacy and urgency based on stakeholder theory (Mitchell et al., 2016). The overall performance of a PPP road project cannot be predicted only by the categorised factors but the socio-economic factors of the PPP conditions should also be considered in managing end-user stakeholders along the project route. The performance of the prescribed PPP road projects can be effective through the appropriate management of end-user stakeholders within the host community boosting return on investment and communications amongst others.

- Safety efforts by the contractor which created barriers and flaws along the project route when necessary safety infrastructures are not implemented. The provisions of good examples of facilities that are not available on the project routes based on the oversight responsibility of the private investors are road signs, speed limit devices,

crossing structures (pedestrian bridges), and special crossing for school children among others.

The improvement of safety on a road network is inevitable; this will support road authority in decision making recommending procedures for successful road infrastructure safety management (Persia et al., 2016). The government does not see PPP as an advantage of service delivery but rather means of raising the much needed off budgetary for financing infrastructure projects (Akintoye et al., 2011). The National policy through their documents enhanced the performance of PPP regulations in Nigeria (Draft National Transport Policy, 2010) recognizing the involvement of stakeholders. Engaging end-user stakeholders in providing facilities and infrastructure will definitely enhance the quality value of neighbourhood (Freeman and Moutchnik, 2013) in which the project is situated. The role of private sectors in PPP arrangement is to give supplementary value to facilities made available by the public sectors (Auzzir et al., 2014). This will justify the inadequacies in public sectors with observed competences in terms of operational management, finance and expertise. The private sector should imbibe good practices by providing road safety infrastructure which solves the problems established by this study. Involving private investors in government projects is essential in order to deliver quality services to the community (Auzzir et al., 2014). This is necessary to overwhelm any flaws or inadequacies of government in providing adequate road safety infrastructures for end-user stakeholders in any area of PPP project operation.

- Environmental impact needed to be considered when planning a PPP road project in order to achieve any sustainable development in a community neighbourhood (Malvestio et al., 2017). Road infrastructure are related with the intake of natural resources and space commonly complemented by varieties of environmental impacts such as water pollution, noise level and air pollution among others (Blanco et al., 2014). Environmental impact assessment is very necessary only for big projects that have the possibility of triggering substantial harmful environmental impact for end-user stakeholders along the project route.

However, to establish a decent PPP plan, earlier studies (Akintoye et al., 2011; Olusola et al., 2012; Auzzir et al., 2014; Babatunde et al., 2016; Opawole and Jagboro, 2016) have recommended that both private and public sector should suppliment one another in terms

of organisational arrangement; shared risk and benefits and mutual coordination. Complex relationships between environmental, economic and social dimensions, as well as long-term development visions require sustainable development for decision making (McManners, 2016). This is facilitated by established framework that will encourage partnership between private investors and end-user stakeholders of any PPP road project.The end-users stakeholders' apprehensions concerning the promotion or participating in PPP is inevitable. Hence, this study derived a framework from a viewpoint of the life cycle of both Lekki-Epe and Apakun Muritala Muhammed toll road projects (from inception to operation stages) as discussed in previous chapters.

- Benefit realisation and community participation of end-user stakeholders of the PPP road project is unavoidable. In a developing country like Nigeria PPP should be an attractive tools to develop the lost infrastructure facilities with quality service based mechanism for end-user stakeholder of any PPP road project (Jomo et al., 2016). Both governments and public sectors (end-user stakeholders) can benefits from PPP mostly with those long-term contracts like road projects. Mourgues and Kingombe (2017) established benefits such as quality assurance and scrutiny; greater operating efficiency in the use of resources and capital at risk to performance among others. Benefits such as job creation, repairs of local minor roads and provision of drainage facility for flooding cannot be overemphasised.

Potential benefits related with PPPs can be achieved depending on how PPPs is structured, procured and implemented effectively by government ensuring they translate into lower costs for end-user stakeholder of any PPP road project. The lack of skill and resources to manage PPPs comfortably might be difficult for government to satisfy end-user stakeholders in terms of costs and benefits (World Bank, 2016). The proposed framework should be engage in ensuring PPPs carry out the necessary development and efficiency of cost on the toll road project not as a vehicle for 'off budget' activities (Jomo et al., 2016). End-user stakeholders' assessment on benefits depends on the ability of expected infrastructure to work better than what has been in place before the advent of PPPs.

- Public utilities compensation involves the delivery of traditional facilities such as water during PPP road project (Moore et al., 2017). PPPs can be used to provide utility infrastructures for end-user stakeholders. The use of PPP as an organization

and ownership construction for utility make a better social welfare for end-user stakeholders of road project. Utility and infrastructure are slightly ambiguous from the end-user stakeholders' point of view (Cave et al., 2013). Because they argued that these are services that should be made available to the public (end-user stakeholders) without any hindrances from either government or private sector.

Without any ambiguity, quality water should be provided to the public either by borehole or Water Corporation network so that stakeholders will not suffer from water shortage due to PPP road project.

- Integration with political groups should involve the royal fathers, women leader and religious fathers in some key decisions before and after PPP road project. Balancing and identifying the interests of end-user stakeholders becomes challenging in an open and equitable manner when PPP project is determined (Al-Saadi and Abdou, 2016). The interests of end-user stakeholders changes when forces from social behaviour, organisational change and political pressure becomes unbearable for the private investors compelling the government to compensate and negotiate conflicting expectations of any parties in order for the PPP program not to fail. The expectations and perceptions of end-user stakeholders have not been judiciously related and explored (Kuehn, 2015). These normally endanger the prospect of PPP in any community.

It can also reduce the knowledge and information supremacy of the private sector at least in part, and balance the negotiation process with its knowledge, expertise and monitoring of the contract. Stern established that involvement of political groups allows the 'modification of the contracts in terms of animosity and benefits (Stern, 2012). The procedure is always expensive, provocative and time consuming but it is nearly difficult to predict the outcome of the success of the project if the groups are not integrated.

- Integration of host community which involves community leaders, resident and private firm among others. For PPP to sincerely become pro-poor in disabling the negative significances of the road projects, end-user stakeholders comprising of private firms, leaders and residents of the community in which the project is situated must be seriously considered in terms of consents and opinions (Otsuki et

al., 2016). The poor participation of end-user stakeholders in PPP projects recently led to the involvement of actors such as advocacy organizations, civil society organizations (CSOs) and non-governmental organizations (NGOs) representing the end-user stakeholders, as well as research universities and institutions (Vaes and Huyse, 2015). Replacing the diminishing government and public funding through the search of alternative financing mechanisms by the commitment of CSOs and NGOs also stimulate justifiable benefit-sharing and enhance the overall effectiveness and development relevance of PPP projects (Otsuki et al., 2016). Therefore, PPPs need the involvement of CSOs, community leaders, residents and private firms in decision-making processes in order to ensure the project's sustainability.

All PPP projects, especially road which involves land procurements, has an element of end-user stakeholders participation, and scholars are anticipated in validating authorised information about the consent-building and initial discussion procedures between private investors and end-user stakeholders (Pearce, 2016). Most of the discussions end in chaos when the story of participation arose from the community stakeholder because the stakeholders that supposed to participate are not specified at the beginning of the project.

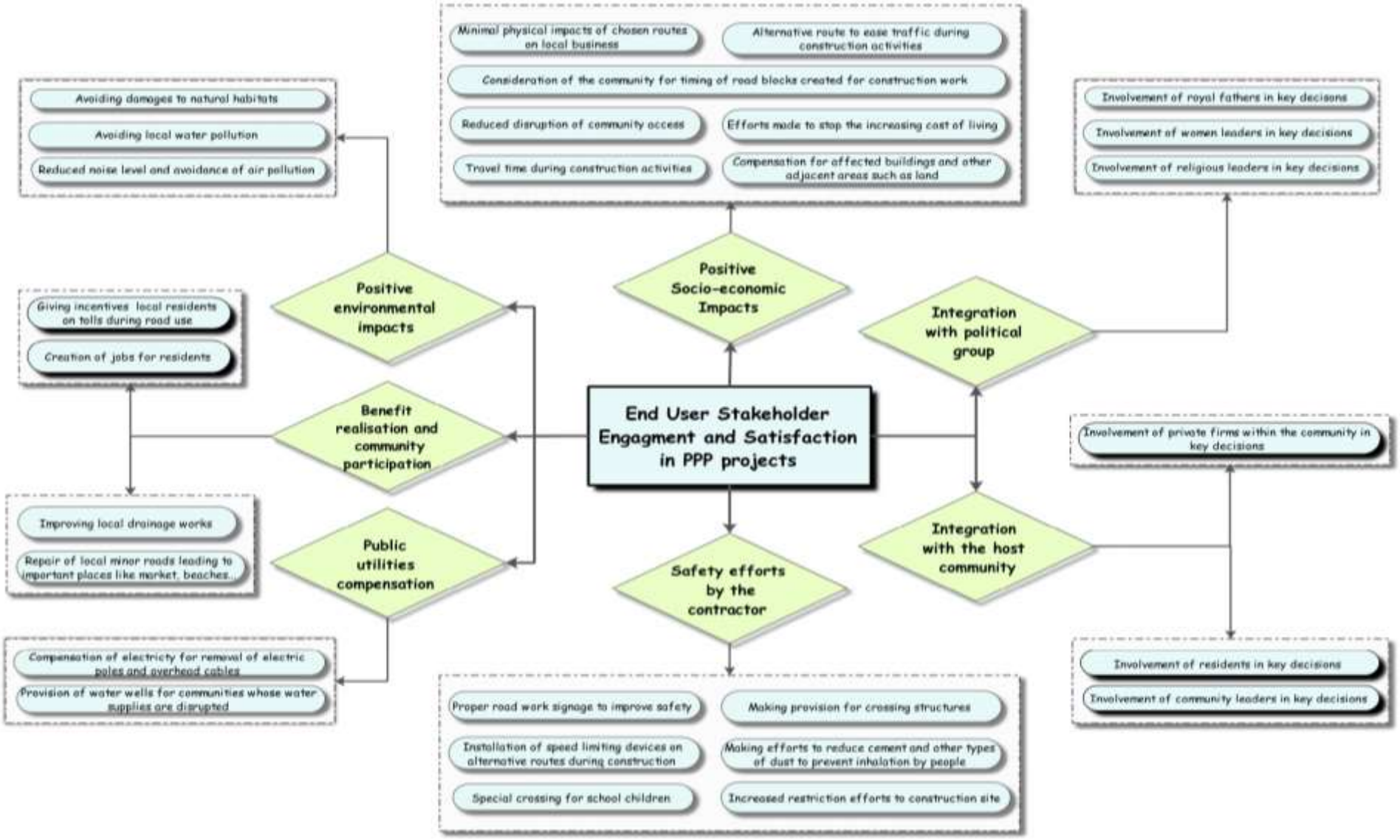

Figure 6.1: Developed Framework for End User Stakeholder Engagement in PPP projects in Nigeria

6.7 Validation of the Framework for End User Stakeholder Engagement in PPP Projects in Nigeria

The established PPP framework was cross validated using the case of a PPP project in Nigeria – Lagos – Ibadan Expressway. In 2009, the Federal Government of Nigeria awarded a concession for the upgrade and expansion of 105KM Lagos-Ibadan Expressway to an indigenous company, Bi-Courtney Highway Services Limited. The expressway criss-cross three south- western states of Lagos, Ogun and Oyo states, which starts at Ojota interchange through shagamu junction, Ogere and ends at Ojoo in the city of Ibadan; a distance of 127.6km. Three professionals that participated on the failed Lagos-Ibadan expressway were identified and selected for the validation process. Amongst the selected professionals are the members of project's host community, project manager, and project engineer that worked on the failed project.

The administered questionnaire from the analysed data was used for this purpose (see appendix D). Each of the selected professionals is given a copy of the structured questionnaire showing the detailed explanation of variables used in the factors analysis that gave birth to the framework. Twenty-seven (27) out of the thirty-three (33) variables were selected for consideration and treated by the professionals due to non-contributing of other variables. All respondents that were considered have experienced more than one PPP road projects apart from the failed one. This gave the credence for their selection and offers robust reliability on their results in giving significant assessment to the framework support. As a result of this, each respondent validated the framework on the quality and standards of safety effort by the contractor, socio-economic impact, benefit realisation and community partcipation, environmental impact, public utilities compensation, integration with the host community and integration with political groups. In trying to be emphatic on professionals judgements, the questionnaire given were evaluated with Yes/No answer as a way of appraising the potentials of the framework.

Therefore, the levels of implementation from the professionals' point of view were evaluated as a way of confirming the variables that were listed for validity. The three respondents assessed the questionnaire independently without prejudice on the conditions of practicability, applicability, inclusiveness and efficiency. Out of all the variables listed for implementation, the safety effort by the contractor comprising of six variables were

adjudged with 50% Yes responses indicating an average level of implementation for safety effort by contractor (see Table 6.1). The socio-economic impact is poorly implemented with only 14.9% response for Yes (see Table 6.1). The Benefit Realisation and community participation stood at 25% while the Environmental impact average below 22.2% (see Table 6.1). Integration with the host community and Integration with political groups both have different ratings of 44.4% and 33.3% respectively as revealed in Table 6.1. Surprisingly there was no implementation of any variable of Public utilities compensation. The cumulative assessement on the entire implementation of the proposed framework indicates a very weak implementation of 31% - the project failed. This is an indication of the hidden problem on the Lagos-Ibadan Expressway project which many would not easily observe as contributing to the failure of the proposed project. There is no indication of any benefits cum community participation, environmental impact and public utilities compensation through the assessment of the professionals; this has shown a very poor on level of implementation of the proposed framework hence showing why the Lagos-Ibadan expressway project failed. There is little or no level of implementation on integration with the host community and integration with political groups on the proposed framework from the repondents' assessment.

Apart from all other regulatory and legal frameworks guiding the PPP procurement, the factors extracted from the analysis for validation through the respondents demonstrated significant reasons for the failure of the Lagos-Ibadan expressway road project before the federal government intervention. Due to the easy use of the questionnaire on dynamic and coherent presentation of the proposed framework, the professionals jointly agreed through their assessment that the proposed framework would improve and provide support to any PPP road project if implemented.

Figure 6.2 shows the level of implementation of the variables for managing End-user stakeholders' participation in PPP projects for a typical PPP road project in Nigeria. The outcome of the respondents shows a very low level of implementation of the variables which ultimately led to the failure of the project. The variables were drawn up as implemented against the expected implementation of 100% depicting a clear low level implementation as shown (see Figure 6.2)

Table 6.1: Results of Validated Responses for the Proposed Framework.

S/N	Questionnaire variables used in the factor analysis	Level of implementation Yes/No		
		Resp1	**Resp2**	**Resp3**
	Safety efforts by the contractor 9/18=50%			
6	Putting proper road work signage in place to increase safety	**No**	**Yes**	**Yes**
8	Installation of speed limiting devices on both main and alternative routes during construction	**No**	**Yes**	**Yes**
9	Making provisions for crossing structures	**No**	**No**	**No**
11	Create special crossings for school children	**No**	**No**	**No**
12	Make effort to reduce cement and other types of dust so as to avoid inhalation by members of the host community	**No**	**Yes**	**Yes**
15	Increase restriction efforts to construction site so as to increase safety	**Yes**	**Yes**	**Yes**
	Socio-economic impact 3/21=14.9%			
19	The choice of route for the road in terms of minimal physical effect (e.g. demolition of buildings) on local properties and businesses	**No**	**No**	**No**
23	Provision of alternative route during construction to ease traffic	**No**	**No**	**No**
24	Reduction of disruption of community access	**Yes**	**Yes**	**Yes**
26	Make efforts to stop increase in cost of living and provide for basic infrastructure.	**No**	**No**	**No**
29	Consideration of the community for timings of road blocks created in order to carry out construction works	**No**	**No**	**No**
31	Compensations to affected building and adjacent areas such as lands, shops, petrol stations and	**No**	**No**	**No**
33	Improved travel time during and after construction	**No**	**No**	**No**
	Benefit Realisation and community participation 3/12=25%			
1	Creating jobs for residents	**No**	**Yes**	**No**
2	Improving local flooding and drainage works	**Yes**	**Yes**	**No**
4	Repair of local minor roads leading to important places like market, beaches and other recreational areas	**No**	**No**	**No**
5	Giving incentives to local residents during road work	**No**	**No**	**No**
	Environmental impact 2/9=22.2%			
7	Avoiding the damage of (or replacing damaged) natural habitats like water ponds, mangroves, forest etc.	**No**	**Yes**	**Yes**
14	Avoiding local water pollution	**No**	**No**	**No**
16	Control of Noise level and air pollution	**No**	**No**	**No**

S/N	Questionnaire variables used in the factor analysis	Level of implementation Yes/No		
		Resp1	**Resp2**	**Resp3**
	Public utilities compensation 0%			
17	Providing water wells for communities whose water supply are disrupted due to construction works	**No**	**No**	**No**
	Integration with the host community 4/9=44.4%			
18	Involvement of Community leaders in key decisions	**Yes**	**Yes**	**Yes**
20	Involvement of Residents in key decisions	**No**	**Yes**	**No**
25	Involvement of private firms within the community in key decisions	**No**	**No**	**No**
	Integration with political groups 3/9=33.3%			
30	Involvement of Royal fathers in key decisions	**Yes**	**Yes**	**Yes**
32	Involvement of Women leaders in key decisions	**No**	**No**	**No**
22	Involvement of Religious leaders in key decisions	**No**	**No**	**No**

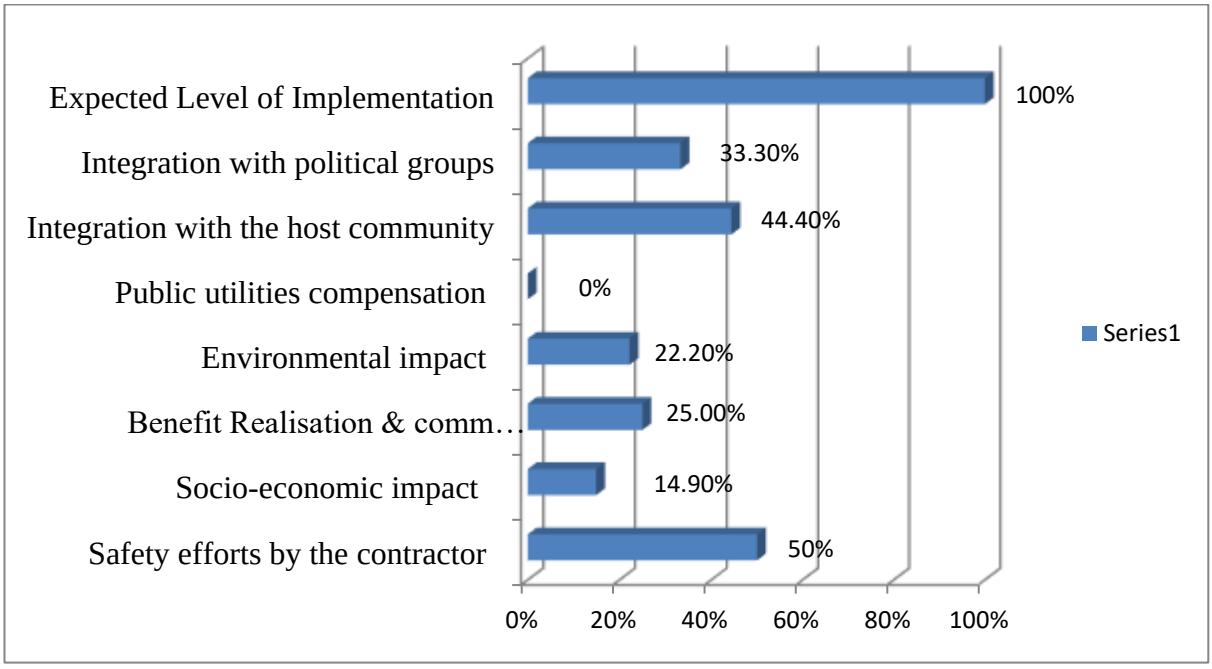

Figure 6.2: Bar chat for Validated Responses against Expected Implementation for the Proposed Framework.

6.8 Chapter Summary

There is no universal inference that is generally acceptable on PPP due to its multifaceted underpinning philosophies. Innumerable appraisals using with other partnership arrangements have been tried by academic and industry practitioners but to no avail in principles. The findings of the research shows that PPP became an option for the nation discussion when Nigeria government is facing serious limitations to budgetary allocations at all levels.There are apprehensions relating to marginalization, negligence and public outcry when the PPP project was implemented at the detriment of community stakeholders. These were serious issues that affected end-users stakeholders of Lekki PPP and Muritala Muhammed toll road project.The perspectives of end-user stakeholders on PPP, is to expect the private sector to deliver value for money in terms of innovation, project quality and delivery of project as at when appropriate.The progress and development of PPP had been faced with several challenges especially in Nigeria as an emerging economy country.

It is fundamentally essential to provide an avenue for resolving variances in the PPP arrangement decision-making process between the private sector (Project Company) and the end-users stakeholders before any dispute arises. The findings has revealed that PPPs on road project will always fail unless public authorities (governments) have assured themselves beforehand that the projects are for public interest and are tolerable to end-users and other stakeholders. This should involve consultation and discussion with all affected groups especially if the handover of infrastructure services to the private domain is linked with a termination of appropriations as end-users may see this as a denial of well-earned rights. Communities' approaches to consultation and communication and with end-user stakeholders generally work better when applied in performance with rather than in lieu of public sector communication approaches. It is sensible on government part to get the end-users involved at the early stage of the project in providing infrastructural services to the community at large. By doing that both parties agreed at the earlier stage of the project on aims and objectives, need and concerns; these are to be fully identified and addressed in the execution of the project.

Infrastructure combined with social inclusion and equity, productivity, environmental sustainability and quality of life are the bedrock of end-user stakeholder's needs. End

users should have relevant access to information about the technical and financial aspects of the project and get an opportunity to make their impact. End users stakeholders' needs along the project routes are evaluated with analysed data which requires grouping and was identified from literature and professionals opinion to achieve desired objectives of the research. Results were presented and analysed showing the reliability for the required statistical tests using factor analysis to determine the cronbach alpha of the data set and also testing KMO and Bartlett for competency and suitability of research samples. The overall Cronbach's alpha coefficient test results gotten from SPSS for this study is 0.882 which is more than 0.8 required as good internal consistency which was run for the 33 variables portraying worthy consistency for the data used. Nine (9) factors were extracted with the methods of 'principal component' method and 'direct oblimin' oblique rotations which converged at a value of 50 iterations. The development process for managing end-users stakeholders' of the researched PPP toll roads depends on the extracted factors gotten from the analysed factors.

A proposed framework was develop to encapsulate the life cycle of expected infrastructures to be made available for both Lekki-Epe and Apakun Muritala Muhammed end-user stakeholders from inception to operation stages was discussed. Seven (7) factors were extracted from the principal component method of factor extraction which was used to design the final framework as a tool in engaging end-users stakeholders' marginalization for a PPP toll road project. The framework was validated using Lagos-Ibadan expressway as a case study. This must be followed to prevent the public responsiveness with aggression to tariff modifications and any other shortfall in services relative to prospects, potentially leading to a criticism against both the private sector (Project Company) and the government. The most crucial idea that can be given to both government and private sector willing to carry out any form of PPP arrangement is to involve the traditional rulers, community leaders, youth leaders, women leaders, religious leaders and the media in their strategies for any toll road project. All these representatives must be involved in the design, build and other notable phases of the project. This will lessen any agitation that might arise from any community stakeholders. The proposed framework was later validated with Lagos-Ibadan Expreeway road project that eventually failed due to the prescribed factors for end-users stakeholders that are not inclusive in their arrangement

CHAPTER 7 CONCLUSION AND RECOMMENDATIONS

7.1 Overview of the study

In a modern world, Public Private Partnership (PPP) in construction infrastructure has gained significant attention in developing countries following its achievement in the developed countries. Public Private Partnership (PPP) is an infrastructure delivery approach, which combines the effective managerial expertise and finance of the private sector with public sector supervisory and regulatory capabilities. Many developing nations such as Nigeria have also embraced the PPP approach in order to bridge their huge infrastructural gaps, one of the major factors militating against PPP projects successful growth and development is poor end-user stakeholder management. This has led to agitations which are generally attributed to insufficient end-user consultation that often bedevils the Lekki-Epe PPP toll road project in Nigeria. The cultural teachings learnt from the end-users stakeholders' marginalization on Lekki-Epe PPP toll road demonstrated that government in Nigeria and indeed other countries in Africa needed to engage the stakeholders in any form of PPP arrangement. Managing the end-users stakeholders requires incessant interactions between the members of the public and the project organisation, so that common development of understanding can be achieved between the two parties and any other stakeholders involved. It is even recommended that the private investors and government must involve traditional rulers, community leaders, women leaders, religious leaders and the media in their strategies for any toll road project. The only solution to this particular problem is to find a better way to agree with individuals or entities connected to the project in order to improve the end-users stakeholders' management involvement.

End-users stakeholders disengaged their services because they felt neglected, forgotten or unfairly treated. Solving these problems, a follow-up plan/framework needs to be designed to counter the challenges expected from PPP projects. Part of the model is deployed in a knowledge base used for recommending appropriate stakeholder involvement tools. Despite the strong contributions of this study on PPP stakeholder management, a major flaw is that there is no specific focus on end-users stakeholders' management. Stakeholders' management in PPP projects in other developing countries such as Nigeria for example have not been examined, despite the nation appearing as one of the major

destination of PPP investments in Africa. Currently, no scientific study has been conducted on a robust framework for managing the interests of end-user stakeholders in PPP particularly in Nigeria. This represents a significant gap in knowledge, which this study has justified by filling the gap. Therefore, this study emerges with the overarching aim of developing a framework that will encapsulate the strategic approach for successful management of the diverse interests of end user stakeholders of the PPP road projects in Nigeria, using a case study of Lekki-Epe expressway toll road project in Lagos Nigeria. To succeed in the process of improving the quality of the outcome on end-users stakeholders' management, the actual needs of the end-users have to be understood. A need is difficult and unconscious to express, while requirements are declarations related to existing condition. Based on this premise, the study answered the following research questions in order to achieve the overching aim earlier mentioned:

a) What is the genesis of Public Private Partnership (PPP) in Nigeria and who are the end-users stakeholders of PPP project?
b) What are the challenges facing end-users stakeholders of PPP toll road project in Nigeria?
c) What are the benefits and challenges facing PPP road projects in Nigeria from the end users stakeholders' perspectives?
d) What are the requirements needed to engage end-user stakeholders of PPP toll road project in Nigeria?
e) How to develop a framework for managing end-user stakeholders in PPP arrangement in Nigeria

However, proper management of stakeholders must be carefully observed with full applicability of their involvement competitive and transparent bidding process, conception and implementation of the project, local investor's participation and regulatory framework with strong commitment from government. Government must also embark on consistent awareness programmes for any form of PPP arrangement packages. The annoyance caused by the toll road project could be suggestively mitigated through the establishment of structures for social and environmental management with the inclusion of environmental protection procedures for the end-users stakeholders of the project community. Partnering, a system of procurement that allows the participation of both public (end-users stakeholders) and private sector (Project Company) in procurement is highly recommended for use in Nigeria construction project procurement. Compliance of basic

rules of environmental protection during construction must be guaranteed. Work site organisation and observance of the basic rules of environmental protection during the works will help ensure tolerable impacts by the natural and human environment pending a clear improvement of socioeconomic conditions once the rehabilitated road becomes operational. It is recommended that toll prices should only be secured after consultation with the Community stakeholders. Agreed that the private investors seek a return for their investments, the public must be assured that PPP is not exploitative. In the same wise, the public must be aware that they should be ready to pay for use of toll roads at a reasonable price but not below a suggested price by the project company in order for the facilities to be properly maintained. The projects strategy arrangements and practices developed are effective in accelerating transport infrastructure improvement through PPP approach in Lagos Nigeria. Therefore, it is expected that practioners and policy-maker would be informed on the fundamental strategies to engage in implementing upcoming projects.

7.2 Introduction

This thesis developed a conceptual framework for managing end-users stakeholders PPP arrangement in Lagos Nigeria. At the emergent of this framework, a comprehensive extant literature was reviewed, mixed method approach was adopted and unstructured interview and questionnaire was used as research strategies. Two case study approaches are used. The interview strategy was used to execute the case study approach while multiple case studies used in this study were to improve generalisation or reliability of the study. The survey strategy was used to facilitate the case study, and also Nvivo and SPSS software were used to analyse qualitative and quantitative data from the case study in chapter 6 and 7 of the thesis. The research contribution to knowledge will then be acknowledged. In this chapter, the research objectives and methods employed in achieving these objectives were reviewed.

This chapter will further presents the key findings from the extant literature and research objectives in the previous chapters. Similarly, similarities and differences between these findings were discussed. In the same vein, limitations of this study are highlighted

and appropriate recommendations are proposed. This chapter finally concludes with promising areas for further research.

7.2.1 Review of research objectives

As previously discussed in chapter (1) one of this thesis, this study has required to answer some relevant questions:

a) What is the genesis of Public Private Partnership (PPP) in Nigeria and who are the end-users stakeholders of PPP project?
b) What are the challenges facing end-users stakeholders of PPP toll road project in Nigeria?
c) What are the benefits and challenges facing PPP road projects in Nigeria from the end users stakeholders' perspectives?
d) What are the requirements needed to engage end-user stakeholders of PPP toll road project in Nigeria?
e) How to develop a framework for managing end-user stakeholders in PPP arrangement in Nigeria

In this regard, this study aimed to develop a framework that will encapsulate the strategic approach for successful management of the diverse interests of end user stakeholders of the PPP road projects in Nigeria, using a case study of Lekki-Epe expressway toll road project in Lagos Nigeria. To achieve this aim, the research is then driven by the main five objectives that are to:

1) Examing the evolution of PPP arrangement and identify various end-user stakeholders' perspectives.
2) Exploring the potential challenges facing PPP arrangement in Nigeria
3) Investigating the challenges facing end-users stakeholders of PPP road project in Nigeria and identify factors for better end-users stakeholders management
4) Evaluating the end-user stakeholder's needs along the project route.
5) Developing and Validating a framework for managing end-users stakeholders PPP arrangement in Nigeria

7.3 KEY FINDINGS FROM THE STUDY

The key findings derived from this study are summarised under two comprehensive headings as follows: (i) findings evolving from the reviewed of existing literature; and (ii) findings based on the methodical processes followed in the tradition of the study and the specific objectives of the study.

7.3.1 Research findings evolving from existing literature review

The summary of the results arising from the review of existing literature are as follows:

Despite the wide acceptability of Public Private Partnership (PPP) schemes in many Nigerian states, especially Lagos State (commercial capital), Abuja (official capital of Nigeria), Rivers State, Cross River State, Akwa Ibom State, among others (Babatunde *et al.,* 2016), one of the major factors militating against PPP projects successful growth and development is poor end-user stakeholder management (Amadi *et al.,* 2014; Abednego and Ogunlana, 2006). This challenge has been highlighted by Ncube (2010) who argue that poor management of end-users interests in Build-Own-Operate-Transfer (BOOT) projects, a type of PPP, is a common theme in many African nations. Lehtiranta (2015) described end-users as the indirect employers of businesses involved in any construction project and they are also the forgotten ultimate customers of the industry.

This feeling of end-users stakeholders is that of imposition of high costs toll charges and this often leads to widespread negative reactions and agitation (Ncube, 2010). According to Gregory *et al.* (2003), end-user stakeholder opposition mostly emerge in projects where the public sector adopts a 'user-pays' PPP approach. Predictably, such decisions result in stiff resistance and public outcry (Yuan et al., 2009). The prevalence of end-user stakeholder opposition to PPP projects often vary across project types (Lv and El-Gohary, 2016). While PPP projects such as hospitals, schools, prisons etc. may not usually attract vehement opposition from end-users (Zitron, 2006; Mostafa and El-Gohary, 2014), such is not always the same with projects like toll highways, sewerage systems, hazardous waste projects, water projects etc. (Aziz, 2007; Gunnigan and Rajput, 2010).

Managing the end-users stakeholders requires incessant interactions between the members of the public and the project organisation (Pernille Eskerod and Anna Lund Jepsen, 2013) so that common development of understanding can be achieved between the two parties and any other stakeholders involved. However, PPP being a multi-participant procurement approach, it consists of numerous stakeholders namely: public sector, lenders, project company, project host communities, architect, construction and operations contractors, insurers, end-users etc. (Hofmeister and Borchert, 2004; Delmon, 2011; Ping and Bing, 2014; Li and Zou. 2011). Thus, managing the interests of stakeholders in such complex and dynamic arrangement can be quite challenging (Schepper *et al.,* 2014). Recently, researchers have argued for more robust strategies for addressing end-user stakeholder opposition in PPP projects especially on toll highways (Lim et al., 2005; Mostafa and El-Gohary, 2014; Hill and Jones, 2007; Yuan *et al.,* 2009; Chung *et al.,* 2010; Harris, 2010; Akintoye *et al.,* 2011). The only solution to this particular problem is to find a better way to agree with individuals or entities connected to the project in order to improve the end-users stakeholders' management involvement (Pernille Eskerod and Anna Lund Jepsen, 2013).

In spite of the significant research efforts towards examining stakeholder management in PPP projects generally in Nigeria, there is a paucity of research on end-user stakeholder management in PPP projects within Nigerian context (Olusola et al., 2012). There is however researches that provides suggestions on end-user in general in PPP projects in other countries (Lehtiranta, 2015). For instance, Lv and El-Gohary (2016) in their research argued for more inputs from stakeholders in order to achieve success in PPP projects. The study suggested a semantic model and taxonomy of key themes (stakeholders data information, resolving differences etc.) underpinning stakeholder participation in PPP projects. Part of the model is deployed in a knowledge base used for recommending appropriate stakeholder involvement tools. Despite the strong contributions of this study on PPP stakeholder management, a major flaw is that there is no specific focus on end-users stakeholders' management.

Other studies such as Fischbacher and Beaumont (2003), Ping and Bing (2014), Smyth (2008), Awodele et al., (2011), Hampton (2012), Yang et al. (2011) etc. have also examined stakeholder management in PFI/PPP and constructions projects in general. But most of the studies have also failed to specifically investigate end-users interests in PPP

projects. Currently, no scientific study has been conducted on a robust framework for managing the interests of end-user stakeholders in PPP particularly in Nigeria (Babatunde et al., 2016). This represents a significant gap in knowledge, which this study has filled.

7.3.2 Exploring the Potential Benefits and Challenges facing PPP arrangement inLekki-Epe toll road Project in Nigeria

Projects coupled with their complex contractual arrangements present stakeholders with many inherent challenges and risk factors. However, these challenges are diverse across different nations depending on the level of their maturity in terms of PPP applications. In many emerging economies, especially in Lagos Nigeria, the growth, and development of PPP had been faced with a number of inherent challenges and specific risk factors. These challenges have militated against the successful implementation of many early PPP initiatives in Nigeria. Some of the challenges that faced PPP Lekki-Epe toll road development in Lagos Nigeria are lack of transparency and competitive procurement process which was noticed when the contractor was selected without following the public procurement act of 2007. The bidding process was not publicised, no challenging bids from other consortium and even the fact that the Governor and his political associates have personal interest in project outcome. On the other hand, the completion time of the toll road project was between 6-8years which is too lengthy as procurement period and was caused due to the changes in political leadership, when the new government renegotiated the almost completed project. The Lekki-Epe toll road project was extremely involved in Lagosian politics. The new governments declined to honour contractual agreement which was agreed upon with the previous administrations. This has shown that the politics of introducing PPP in road projects has clouded the norms of the structure of PPP framework. The PPP procedure presently has been twisted against private sector, which is a problem of “master-servant” relationship where most PPP arrangement cannot survive the government that initiated them. The issue of corruption is not far fetched in Nigeria’s public procurement, with more than one-third of business firms hoping to part with gratifications or payments to civil servants in order to secure government contracts. For example, between 20-60 per cent of government spending on procurement is lost due to financial leakages and malpractices within the Nigerian public sector. However, procurement regulation has improved lately although large-scale corruption and political

favouritism remains a key factor affecting effective public procurement especially when implementing PPP projects. The consideration of government partnering with the private sector for the provision of infrastructure has become essential, but it is imperative to consider the involvement of community end-users stakeholders which has an impact in the success of PPP projects. The host community stakeholders were left out from the conception stage of the Lekki-Epe toll road project which constituted a serious factor that led to the failure of the arrangement in generating more revenue from other proposed toll gates.

7.3.3 Positve and Negative effect of End-Users Stakeholders in Lekki-Epe toll road Project in Nigeria

In spite of the noticeable merits that PPP can deliver to the public sector, community end-users stakeholders have considerable impact to the success of PPP projects either positively or negatively. The strong contributions of this study on PPP stakeholder management, a major flaw is that there is no specific focus on end-users stakeholders' management. For this thesis, a number of significant potential effects (positive and negative) were identified through analysis of data collected from the host community. Positive effects do not require modification measures, but on the other hand negative effects required modification in order to showcase their levels of significance in the nearest future. Most of the positive effects are not far fetched such as good roads that commute the neighbourhood stakeholders to their various destinations, reduction in travel time such that the community stakeholders are not wasting more than enough time in traffic gridlock and most importantly getting rid of the poachers along the project route after completion. . It can be acknowledged that development of road infrastructure has a huge advantage in reducing traffic, road safety improvement and mostly developing the economy along the project community while eliminating unnecessary happenings such as reduction in fuel consumption, journey time's shortened and significant reduction in wear and tear on motor vehicles etc. The major class of the stakeholders that really benefitted from the PPP arrangement along the project route are the landlords whose house rent soared to an uncontrollable price depending on the location and type of edifice available. Additionally, the above listed benefits are not ordinary some of the comprehendible along the project area includes immense support for business development, promoting the real

estate values and creation of employment due to the upgrading of the infrastructure facility.

The most important aspect of this thesis is the negligence being meted on the community stakeholders even before and after the completion of the project. It is undoubtedly fact that consultation and involvement of community stakeholders should be seen as a major component of any PPP projects that want to be successful. These are negative effects that have been critically observed in this thesis. With respects to other stakeholders, such as traders, landowners and other users of the road passageway, several levels of consultations should have been held with them before the inception of the project. This study discovered that it was later after the project has taken off, the Resettlement Action Plan (RAP) was later conducted to look into the affected stakeholders and a RAP report was presented. The report that was presented did not even see the light of the day in implementing their observations. The end-users stakeholders along the project neighbourhood were subjected to various hardships during the implementation stage of the project. Hardships varying from route alternatives, airpollution, habitat accessibility, market disorder and vulnerability of school children and so on.

Involvement of royal fathers, community leaders, religious leader, and women leader along the the project route was flouted making the project dead on arrival. Knowing fully well that these royal fathers and other leaders have great influence on the neighbourhood stakeholders who can forment any troubles when the need arises. Because their views were not sought, the situation was difficult during the implemation stage of the project arisig to court litigation and pubic outcry. The community stakeholders suspected government actions thinking there was secrecy in the PPP arrangement in terms of ownership of the concessionaire. Lagos State government should have involved the community stakeholders when the bidding of the project took place which could have averted any suspicion from the host community. Some royal fathers were settled with huge amount of money and the project eventually become successful. The role of the media as part of end-users stakeholders could have assisted the State government at the inception phase of the project if they were established.

Development associating with the attraction of a crossing structure in the project area is not available. Pedestrian infrastructures (e.g. crosswalks) which supposed to be a

mandatory facility for the community stakeholders are not offered. This can facilitate movement of end-users stakeholders living in the neighbourhood of the project. Crossings for animals were not provided, leaving most animals such cows, goats, wildlife, amphibians and so on to lose their lives without care. Only one pedestrian bridge was provided for a 49.4km road, which is insignificant compared to the need for end-users stakeholders' accessibility to their various abode and endangering the end-users stakeholders' life in terms of incessant vehicular accident.

Principle of urbanization in terms of special crossing for school children are not followed by providing several zebral crossing for the school children. It was found out from the study that several numbers of schools ranging between "1-31" were situated along the project route. These have necessitated for provision of zebra crossing in order to allow school children along the project community to cross the expressway where is needed. Even crossings were not provided for dangerous intersections and busy traffic roads where stakeholder's recorded high accidental rate. Significant emphases were not put in place for dynamic transportation (i.e., cycling or walking) as it was related to school children's mode of transport along the project route to and from school. This has hindered the accessibility of various schools based on variables such as traffic experience and street connectivity. Inadequate provisions of zebra crossings and speed breakers will cause accident to the vulnerable road user like school children in the community.

The tolling cannot be left out of discussion because end-users stakeholders echoed that it is not appropriate for several reasons. They argued that the State government should not have entered into any PPP agreement that would encourage tolling on a well planned road with an alternative less traffic access road or even affordable public transport systems to ease any future tension for the neighbourhood stakeholders. It is agreeable worldwide that tolling is a way of generating revenue for the government but not too many toll gates within a normal stretch of road as it is in this study does not require multiple tolling. Persuading end-users stakeholders to pay for multiple tolling becomes abnormal which made the current government abolish the remaining toll gates already established for toll collection.

7.3.4 Environmental and Social conditions of End-Users Stakeholders along the Project Route

Environmental integration should be considered in terms of planning, design and execution of road projects which is essential to exploit the benefits of end-user stakeholders along the project neighbourhood and reduce the negative effects for any future reoccurrence. This study discovered through interview that the environmental and social evaluation was properly surveyed irrespective of hardship meted on the community stakeholders during the exercise. The environmental valuation that was carriedout along the project route indicated that the execution of the program definitely have negative effects on the socio-cultural, human and natural environments. Alhough, these possible negative effects have major permanent ecological impacts along the project area and it's environ. Undeniably, these potential negative effects that should have been financially and technically alleviated, within a rational confine or that should have been compensated for with adequate remedial actions through the implementation of stakeholders rights report were totally ignored.

There are several social problems with high negative significance, which should have prevented the implementation of the PPP arrangement. The positive effects cannot be overlooked. These problems and benefits were identified during construction and after project completion. These can be characterized into four categories namely economic, water, environment and safety. The negative economic problems involve high house rent, induced migration, toll charges, effects on local business, disorder of farming activities, total reduction in grazing and arable land and so on. The considerably positive effects involve tourisms, opportunities for minor to major business enterprise and fairly occupation advantage. In relation to water and environmental problems, the negative effects involves water pollution, silting of wetlands, borrow pits, noise, construction camps, cultural-historic sites, loss of farm reservoir and loss of privacy. The noticeable positive effects after completion are good drainage systems and street lightings. However, the negative effects on safety are problems confronting stakeholders daily such as fencing of access route, lack of pedestrian bridge, crime rate within the host community and insfficient ambulance incase of accidents. Hospital and health centres are rarely seen within and along the project neighbourhood.

7.3.5 Framework for Managing End-Users Stakeholders Participation in PPP arrangement Program

Based on several issues that were raised previously, it is clear that a theoretical framework is needed as a guide for any institution willing to operate PPP toll road project, to consider the significant need of end-users stakeholders' collaboration for critical success of the infrastructure. The end-users stakeholders' apprehensions concerning the promotion or participating in PPP is inevitable. Hence, this study derived a framework from a viewpoint of the life cycle of Lekki-Epe toll road project (from inception to operation stages) as discussed in previous chapters.

This framework demonstrates the vigorous process that should be taken in engaging end-users stakeholders during any form of PPP arrangement most especially toll roads project. Also, one of the target responsibilities of the framework is to achieve equilibrium of interests amongst different parties involved and at the long run become conscious of introducing toll charges for all partners along the project neighbourhood including the interests of the host community. It was previously observed from that 9 factors were extracted from the principal component method of factor extraction but 7 factors were eventually used for the design of the conceptual framework as a tool in engaging end-users stakeholders' marginalization along Lekki-Epe PPP toll road project. The main reason why this was done is that they are non-contributory offspring from the extracted factors table (offspring variables 4 and 9 extracted factors).

Finally, the 7 (seven) extracted factors outcomes formed a fundamental basis for end-users stakeholders framework. The framework is designed to give end-users stakeholders assured intensities of influence on any form of PPP arrangement. Henceforth, end-users stakeholders' engagement under any form of PPP will now become an essential focus in incorporating their values, concerns and needs into any corporate and governmental process in decision-making. Significant improvements will be perceived if the conceptual framework below is adopted for end-users stakeholders' management ideas which will integrate the governments, private investors and host community over the PPP development process. It was later validated with Lagos-Ibadan Expressway project which depict a failed PPP arrangementas revealed by assessments of three (3) stakeholders confirming the usefulness of the developed framework.

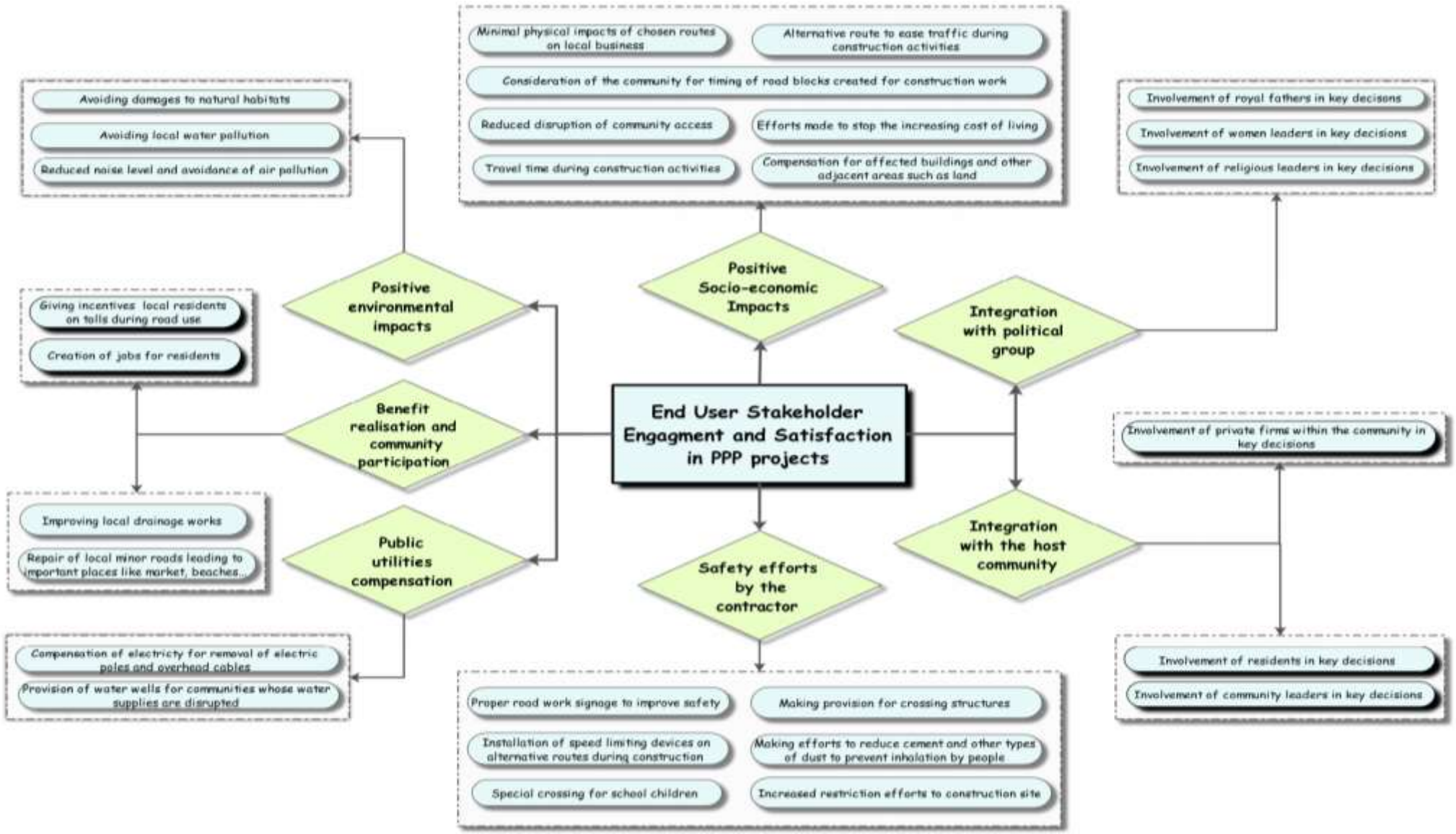

Figure 7.1: Framework for End User Stakeholder Engagement in PPP projects in Nigeria

7.4 Implications of the study

The outcomes that have originated from this study provided for both practice (government) and theoretical impacts which are described as follows:

7.4.1 Practical Implication to study

This study has made the subsequent practical impacts

- End-users stakeholders' management framework has been established for PPP project infrastructure in Nigeria. Presently, there is no existence of such framework, and this improvement is expected to boost the implementation and success of any PPP arrangement in Nigeria, introducing new prospects and offering assistance to the construction industry.
- The framework will inclusively guide most especially the government in decision-making process, addressing any form of agitation that might arise during PPP project developments.
- In contributing to industrial practices, the framework developed as a result of this study will be useful in real life practices by providing other PPP stakeholders with insights into understanding the diverse interests of end users stakeholders. The framework could be used to identify sources of conflicts of interests and disagreements in the delivery of PPP road projects in Nigeria.
- The established framework from this study had provided a target in identifying a typical and logical approach in improving PPP infrastructure projects in Nigeria, and this can also be used as a point of reference for future studies.
- The framework has provided practicable steps that can be followed by stakeholders group in Nigeria involving PPP projects so as to develop their level of competence in terms of maturity and thus assure implementation of long-term success of PPP projects in Nigeria.
- It is anticipated that the framework will assists the government and private investors to have a focussed structure that will involve all the stakeholders in PPP projects, therefore eliminating the basic marginalization virus.

- The framework can enhance government to provide extra facilities and infrastructure needed to cope with the increased populations in any PPP project area thereby enacting laws that will protect the interests of end-users stakeholders
- Where land within the road reserve is held on a registered title, the government should provide alternative solution for community stakeholders in provision or replacement of abutting structure
- Compensation procedures for the affected stakeholders, irrespective of their legal status are eligible for some form of assistance if they occupied the land before the commencement of the toll road project. The main determinant factor for compensation should be on the basis of a pre-project census where all residents will be identified.
- Private investors and government in collaboration with local councils of Oba's, chiefs and village leaders should be responsible for ensuring that vulnerable households received adequate assistance during the process of resettlement. The stakeholders whose properties were removed should be given at least six months' notice before the commencement of the toll road project
- As animal inhabitants can be extremely thoughtful to the definite route taken by a road, it is respected that these ecological representations be integrated during design of a new roadway. This will permit road designers to ascertain original alignments as much as preserving the protracted period of ecological sustainability of new roads along the project area.
- Involving community leaders in key decisions at the conception phase of the project tends to have influence on the members of the community stakeholders and can easily communicate government intention back to the stakeholders since they are nearer to them than the government.
- Speed surveys should be carried out to know the routes that are frequently congested during construction periods in order to ease the burden of the end-users stakeholders along the project route
- A strong relationship and co-operation will be developed between the end users, stakeholders and the government on PPP projects. This will significantly reduce end users' opposition, litigations and the cost expended on dispute resolution.

7.4.2 Theoretical Implication to study

This study has made the subsequent theoretical impacts

- This study would make a significant academic contribution by providing new directions into understanding end users stakeholders' interests in PPP road projects.
- Pointedly, the study would contribute significantly to the study of PPP, by adopting the new framework that was developed in order to streamline the essential factors for managing the diverse interests of end users stakeholders of PPP road projects in Nigeria.
- The study would identify the impediments and challenges; facing PPP infrastructure projects in Nigeria using mixed method approach in solving the problems that may be encountered before the inception of the project.
- Although previous studies had investigated the impediments and challenges in PPPs through an empirical method in Nigeria, hence outcomes of this study are treasured to both private (foreign) and local investors by lengthening the awareness of end-users stakeholders in adopting PPPs in developing countries especially in Nigeria. Also, the outcomes of the study will enable the end-users stakeholders in PPPs recognizing the significant impediments in executing PPP projects in Nigeria.
- This study has not only contributed to knowledge with the respect to the development of stakeholders groups in PPP, but also contributes to the broader body of knowledge of route guidelines to be followed when implementing PPP in construction industry.
- This study contributes to the body of knowledge generating all-inclusive framework that interpreted how PPP toll road project can be successful from the economic and social benefits outlook classifying the understandable conditions.

7.5 Limitations of the study

This study had covered the strategic approach that could be used for successful management of the diverse interests of end user stakeholders of the PPP road projects in

Nigeria. The PPP project that was considered is limited to PPP road projects constructed within the last 10 years. The road has only two toll points and was constructed by both Federal and Lagos government through private investor. The road project is used by both private and commercial end-users stakeholders. The roads are situated in the city of Lagos restricting the area of study Lekki-Epe Expressway and Apakun Muritala Muhammed airport toll roads.

All end users that were considered are all toll-paying users. This include, commercial buses, commercial cyclist, commercial taxis, commercial lorries, trucks or trailer, private bikes, private cars and private buses. Only frequent users, averaging a use frequency of once a week were also considered as part of the sampling population. One of the limitations of this work is the lackadaisical approach from the respondents of Apakun Muritala Muhammed toll road when filling the questionnaires; which later resulted to causative reactions when carrying out the analysis. Another limitation is non-consideration of toll charges imbroglio amongst the end-users stakeholders along the neighbourhood of the project. Presently, no such framework has been established in managing end-users stakeholder's intrests in PPP project development. Therefore, the precision needs futher improvement in forthcoming research. The competence development framework was established in this research and is now designed for stakeholder groups in PPP infrastructure projects. Hence, the study has limited the use of the framework to only PPP projects. One of the significant limitations of this study is that PPP is considered from the end-user stakeholder's perspectives while the success factors of PPP are not considered within the scope of the project

7.6 Future research

Some of the findings in this research have provided promising guidelines for further research in significant areas through the final framework designed to evaluate the end-users stakeholders' management in Nigeria. A deeper knowledge of impediment of these end-users stakeholders' relationships may give valuable insight to government, both private (foreign) and local investors in terms understanding, expectations, necessities of end-users stakeholders and the host communities. This study was established in Nigeria, in

line with the limitation of the study, piloting a similar rsearch in another developed or developing country like Nigeria might be more challenging or otherwise depending on the nature of end-users stakeholders involved.

Furthermore, this research engaged the qualitative method of approach as a tool of collecting data used in questionnaire (quantitative) instead of the usual approach of previous researchers that uses only quantitative approach to determine variables on end-users stakeholders in PPP road project in Nigeria.

7.7 Final Note

This chapter summarises the key findings of the research established from the literature review, interviews and questionnaire survey. The entire objectives of the research have been effectively accomplished, ranging from the evolution of PPP to the challenges of end-user stakeholders and finally to the framework that can be used to manage end-user stakeholders of any community in Nigeria should any PPP road project arise in the future. Hence, this research has contributed to the practice and theory of the construction industry where PPP is applicable. In addition, recommendations for future works were proposed and research limitations were revealed.

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APPENDIX A: INFORMATION TO PARTICIPANTS

END-USER STAKEHOLDERS MANAGEMENT FRAMEWORK FOR PPP ROAD PROJECT IN NIGERIA

INFORMATION TO PARTICIPANTS

This is a Doctoral (PhD) research work which intends to obtain data (information) on challenges facing end-user stakeholders' reaction on Lekki-Epe and Apakun Muritala Muhammed toll road. It is anticipated that the results to be generated by your responses will be used to develop a framework for Public Private Partnership arrangement in Nigeria. It will be appreciated if you can grant an interview on this subject. The interview should not take more than approximately thirty minutes. Thank you for your anticipated participation.

Could you please complete the consent form on the next page? If you have any questions about the study, please contact the researcher, Engineer Toriola-Coker Olalekan Luqman via email: O.Toriola-Coker@edu.salford.ac.uk. Mobile: +234833049163 or +447477002502. You can also contact the research's supervisor, Dr. Chaminda Pathirage through email: Pathirage@salford.ac.uk

ANONIMITY AND CONFIDENTIALITY

The researcher guarantees and reassures your anonymity and confidentiality, as your responses will be used ONLY for the purpose of this research.

APPENDIX B: PARTICIPANT CONSENT FORM

Title of Project: END-USERS STAKEHOLDERS' MANAGEMENT FRAMEWORK FOR PUBLIC PRIVATE PARTNERSHIP ROAD PROJECT IN NIGERIA

Name of Researcher: **TORIOLA-COKER OLALEKAN LUQMAN**

Instruction: Please check box

1. I confirm that I have read the information sheet on the back page for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline. ☐

3. I understand that the researcher will make notes, and that all data gathered will be confidential and securely stored ☐

4. I understand that my responses will be kept strictly confidential. I give permission for members of the research team to have access to my anonymised responses. I understand that my name will not be linked with the research materials, and I will not be identified or identifiable in the report or reports that result from the research. ☐

5. I understand that the information collected about me will be used to support other research in the future, and may be shared anonymously with other researchers. ☐

6. I agree to take part in the above study. ☐

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Name of Person	Date	Signature

APPENDIX C: QUESTIONNAIRE

END-USER STAKEHOLDERS MANAGEMENT FRAMEWORK FOR PUBLIC PRIVATE PARTNERSHIP ROAD PROJECT IN NIGERIA

Dear Respondents,

I am a postgraduate doctoral researcher studying End-users stakeholder's management framework for PPP road project in Nigeria, at the school of Built Environment in University of Salford, Manchester UK. This questionnaire emerged after an extensive qualitative investigation into End-users stakeholders' marginalization in Lekki-Epe toll road in Lagos Nigeria; and am seeking to capture end-users stakeholders' views.

Responses from the questionnaire are only designed for academic purpose, and as such, all individual answers will be treated with utmost confidentiality. This is strictly in line with University of Salford's ethical guidelines as touching anonymity of academic research.

Additionally, I want to stress that your participation in this survey is voluntary, as you reserve the right not to consent or answer any particular question considered offensive or inappropriate. However, be assured that all question only pertains to experiences with End-users stakeholders experience. On estimate, filling this questionnaire will take about 30mins of your time. Finally, in case you have questions regarding the questionnaire, kindly feel free to express them.

Thank you in anticipation of your valuable contributions to this study.

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Section 1 – Respondent's Details

Please mark answers with an 'x' where tick boxes are provided

1. Age of respondent: ☐ 18-29 ☐ 30-49 ☐ 50-64 ☐ 65yrs and over
2. Gender: ☐ Male ☐ Female
3. Occupation: ☐ Student ☐ Public servant ☐ Field worker ☐ Office worker ☐ Driver ☐ Others (please specify) _____
4. Level of education: ☐ No formal education ☐ Primary school ☐ Secondary school certificate ☐ Polytechnic ☐ University

Section 2 - As a user of the Lekki/Epe or Apakun Muritala Muhammed toll road, kindly tick any of following

5. Range of income in Naira: ☐ Less 18,000 ☐ 18,000- 45,000 ☐ 45,000 -75,000 ☐ 75,000 -110,000 ☐ 110,000- 150,000 ☐ 150,000 and above

6. Where do you reside? ☐ Island ☐ Lekki ☐ Ajah ☐ Epe ☐ Mainland ☐ Other (please specify) _____

7. Usual Trip Purpose: ☐ Office ☐ Business ☐ Employment ☐Resident ☐ Shopping ☐ Recreation

8. Have you ever used Lekki or Apakun Muritala Muhammed toll road before? (tick as many as applicable): ☐ Yes ☐ No

9. How frequently do you pass through the toll road? ☐ Daily ☐ three times in a week ☐ once in a week ☐ monthly ☐ rarely

10. What is your mode of transportation? ☐ Car ☐ Bus ☐ Public Transport ☐ Truck ☐ Motor Bike ☐ Other (please specify) _____

11. How comfortable are you with the road in terms of safety: ☐ Extremely safe ☐ Quite safe ☐ Somewhat safe ☐ Neither safe or Unsafe ☐ Not safe

12. How do you assess the traffic situation on the toll road? ☐ Excellent ☐ Very good ☐ Good ☐ Fair ☐ Poor

Considering your experience as part of the host community for a recent PPP road project, please rate the following factors on how important you think they are to the host community. The scale of relevance is 1-5 where: 1 represents No Effects and 5 as Best Option

	How important do you think the following factors are to community stakeholders?	**Effect of Factor**				
		1	**2**	**3**	**4**	**5**
1.	Creating jobs for residents					
2.	Improving local flooding and drainage works					
3.	Royalties for indigenes (compensation)					
4.	Repair of local minor roads leading to important places like market, beaches and other recreational areas					
5.	Giving incentives for local residents on tolls during road use					
6.	Putting proper road work signage in place to increase safety					
7.	Avoiding the damage of (or replacing damaged) natural habitats like water ponds, mangroves, forest etc.					
8.	Installation of speed limiting devices on both main and alternative routes					
9.	Making provisions for crossing structures (Pedestrian bridges)					
10.	Compensation of electricity for removal of electric poles and overhead cables					
11.	Create special crossings for school children					
12.	Make effort to reduce cement and other types of dust so as to avoid inhalation by members of the host community					
13.	Avoiding displacement and killing of wildlife and endangered speeches					
14.	Avoiding local water pollution					
15.	Increase restriction efforts on roads during and after construction so as to increase safety					
16.	Control noise level and air pollution					
17.	Providing water wells for communities whose water supply are disrupted due to construction works					
18.	Involvement of Community leaders in key decisions					
19.	The choice of route for the road in terms of minimal physical effect (e.g. demolition of buildings) on local properties and businesses					
20.	Involvement of Residents in key decisions					
21.	Reduction of impact to cultural sites					
22.	Involvement of Religious leaders in key decisions					
23.	Provision of alternative route during construction to ease traffic					
24.	Reduction of disruption of community access					
25.	Involvement of private firms within the community in key decisions					
26.	Make efforts to stop increase in cost of living and provide basic infrastructure					

27.	Involvement of Youth leaders in key decisions					
28.	Contractor should contribute to the improvement of security in the host community as construction works lead to security risk					
29.	Consideration of the community for timings of road blocks created in order to carry out construction works					
30.	Involvement of Royal fathers in key decisions					
31.	Compensations to affected building and adjacent areas such as lands, shops, petrol stations among others					
32.	Involvement of Women leaders in key decisions					
33.	Travel time during and after construction					

If government should embark on similar PPP project what is your advice?

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Any additional comments

Please state any further information that you feel may have particular importance to the outcome of this questionnaire (you may attach an extra sheet if need be).

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Thank you very much.

APPENDIX D: **Questionnaire for Evaluating PPP Road Projects – Validation.**

S/N	Questionnaire variables used in the factor analysis	Level of implementation Yes/No
	Safety efforts by the contractor	
6	Putting proper road work signage in place to increase safety	
8	Installation of speed limiting devices on both main and alternative routes during construction	
9	Making provisions for crossing structures	
11	Create special crossings for school children	
12	Make effort to reduce cement and other types of dust so as to avoid inhalation by members of the host community	
15	Increase restriction efforts to construction site so as to increase safety	
	Socio-economic impact	
19	The choice of route for the road in terms of minimal physical effect (e.g. demolition of buildings) on local properties and businesses	
23	Provision of alternative route during construction to ease traffic	
24	Reduction of disruption of community access	
26	Make efforts to stop increase in cost of living and provide for basic infrastructure.	
29	Consideration of the community for timings of road blocks created in order to carry out construction works	
31	Compensations to affected building and adjacent areas such as lands, shops, petrol stations and	
33	Travel time during and after construction	
	Benefit Realisation and community participation	
1	Creating jobs for residents	
2	Improving local flooding and drainage works	
4	Repair of local minor roads leading to important places like market, beaches and other recreational areas	
5	Giving incentives to local residents during road work	
	Environmental impact	
7	Avoiding the damage of (or replacing damaged) natural habitats like water ponds, mangroves, forest etc.	
14	Avoiding local water pollution	
16	Control noise level and air pollution	
	Public utilities compensation	
17	Providing water wells for communities whose water supply are disrupted due to construction works	

S/N	Questionnaire variables used in the factor analysis	Level of implementation Yes/No
	Integration with the host community	
18	Involvement of Community leaders in key decisions	
20	Involvement of Residents in key decisions	
25	Involvement of private firms within the community in key decisions	
	Integration with political groups	
30	Involvement of Royal fathers in key decisions	
32	Involvement of Women leaders in key decisions	
22	Involvement of Religious leaders in key decisions	

APPENDIX E: LEKKI-EPE TOLL PLAZA PHOTO

APPENDIX F: APAKUN MURITALA MUHAMMED TOLL PLAZA PHOTO