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RESEARCH REPORT BUQS 7027

INVESTIGATING PUBLIC CONSULTATION IN THE IMPLEMENTATION OF MEGA PROJECTS IN SOUTH AFRICA

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A dissertation submitted to the Faculty of Engineering and the Built Environment, University of the Witwatersrand, in fulfilment of the requirements for the degree of Master of Science in Building (In the Field of Project Management In Construction).

MARCH 2017

DECLARATION

I declare that this research report is my own original work. It is being submitted for the Degree of Master of Science in Building (In the Field Project Management in Construction) at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other University.

_____

M.L. Mahayi (The above declaration is acknowledged)

(Signature of Candidate)

March 2017

ABSTRACT

There is a noticeable prevalence of public resistance when implementing mega public sector projects in South Africa. This resistance is indicative of a lack of communication between implementers and the general populace.

The aim of the study was to assess the regulatory framework of public consultation in mega projects in South Africa.

A cross-sectional survey design of consulting engineers, project managers, and municipality staff, using structured questionnaire was adopted. This was followed by case analyses of three mega projects in South Africa.

The main finding of the study is that there has to be operationalizable regulatory framework which could be utilized to inculcate public consultation, its coordination should be articulated within the three spheres of government, this has to be monitored systematically. As such thereis the need to improve on the provisions and implementation of the existing regulatory framework among the spheres of government for better coordination and monitoring with the public.

Key words: Mega projects, Protestation, Regulatory framework, South Africa, Stakeholders.

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ABBREVIATIONS

BRT	**Bus Rapid Transit**
MFMA	**Municipal Finance and Management Act**
NGO	**Non-Governmental Organisation**
NRA	**National Road Agency**
OECD	**Organization for Economic Co-operation and Development**
OUTA	**Opposition to Urban Tolling Alliance**
PMFA	**Public Finance and Management Act**
PMI	**Project Management Institute**
PPP	**Public-Private Partnership**
PSM	**Project Stakeholder Management**
SA	**South Africa**
SANRAL	**South African National Road Agency**
UK	**United Kingdom**

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CHAPTER 1: INTRODUCTION

1.1 BACKGROUND

Infrastructure projects affect multiple stakeholders, whom most of the time have diverse and, often, conflicting objectives. This lends mega projects to intense scrutiny during the implementation stage and, where the reverse is the case, public protestation during or post-implementation. Regulatory framework has an important role to play in addressing these issues. However, the regulatory framework itself needs to be thoroughly understood by the implementers across the spheres of government for public projects. This is even crucial during the processes of public participation and public consultation; particularly, the former due to its overarching impact on the latter (see O'Faircheallaigh, 2010; Yung and Chan, 2011). Where reverse is the case, protestations against mega projects abound (see Arora, 2007; Diduck *et al*., 2013; Kirchherr *et al*., 2016).

1.1.1 PUBLIC CONSULTATION

The terms "public consultation" and "public participation" are often discussed together and, in many instances, used interchangeably (Lee and George, 2000). Public consultation is undertaken during the process of public participation. Public consultation has its own challenges, which include identifying and categorising the public (Catt and Murphy, 2003) as well as the financial and non-financial resources involved in managing the process (Culver and Howe, 2004). Public participation may be defined at a general level as the practice of consulting and involving members of the public in the agenda-setting, decision-making, and policy-forming activities of organizations or institutions responsible for policy (Rowe, 2004). Currently, in the UK and elsewhere, the issue of public participation is one of growing interest to academics, practitioners, regulators, and governments (e.g., Leach and Wingfield

1999). In the UK, for example, a number of significant recent reports from the government have called for increased public participation at national and local levels, in realms as diverse as health care, the environment, transportation, and local government (for details, see Roberts *et al*., 1999; Owens 2000; Martin and Boaz 2000; Bickerstaff and Walker 2001). The health sector has advanced new approaches for public participation, emphasizing two-way interaction between decision makers and the public as well as deliberation among participants (e.g., Abelson *et al*., 2003). Participatory approach to project decision making is also important for major infrastructure and construction project, with the measurement of its effectiveness lending itself to a systematic, yet fuzzy, evaluation (Li *et al*., 2013).

1.1.2 MEGA PROJECTS

Construction projects have always been a form of social process in that they require people to interact and work together (Söderlund and Geraldi, 2012; Söderlund and Lenfle, 2013). The economic and social benefits of construction projects (Dang and Low, 2013) have led to megaprojects being increasingly constructed and managed over the years (Hu *et al*., 2013). Many of these projects have experienced high cost overruns and extensive delays (Flyvbjerg, 2014), such that managing conflicts is, inherently, important (Anderson and Polkinghorn, 2008). To this point, numerical thresholds around $1 billion have been used to define megaprojects, however, the characteristics that elevate a project to mega-status are much more complex than simply project cost (Fiori and Kovaka, 2005). Social complexity of mega projects stemming from multiple stakeholders has received little attention (see Li and Guo, 2011). The real value of mega projects can (and should) be determined through the multiple stakeholders usually involved and/or affected (Zhai *et al*., 2009). A public protestation will arise if the public consultation process is either unclear (Catt or Murphy, 2003) or the

stakeholders have conflicting values (Mok *et al*., 2015). Studies exist on such a protestation (e.g., Bornstein, 2010; Fainstein, 2008; Johannes and Peters, 2012).

1.1.3 PUBLIC PROTESTATIONS ON MEGA PROJECTS IN SOUTH AFRICA

Increasing rights to host mega sports events for the prospects of an economic windfall has been responsible for the surge in the construction of mega projects in developing countries, including South Africa (Cornelissen, 2008; Matheson and Baade, 2004). On the other hand, South Africa, in particular, still ranks as a developing country with a number of development inefficiencies and drawbacks. The country still lags behind in better infrastructure, equal distribution of resources and economic empowerment for the lower class of the population (e.g., see Ugwu and Haupt, 2007). Therefore, a number of mega public sector projects are undergoing in the country with the aim of improving economic participation and expansion (Bond, 1999; Fedderke *et al*., 2006; Perkins *et al*., 2005). The South African public, however, resist most of these mega projects based on a wide range of aspects such as corruption, non-consultation and inequality (Nattrass and Seekings, 2001; Van Der Westhuizen, 2007; Van De Westhuizen and Swart, 2011). There have been great endeavours to understand the reasons why members of the public in South Africa resist mega projects, including through the lenses of procurement (Ambe and Badenhorst-Weiss, 2012), cost and time overruns (Baloyi and Bekker, 2011), cost-benefit analysis (Maennig and Du Plessis, 2007), and stakeholder participation (Lizarralde, 2011).

1.2 THE ROLE OF REGULATORY FRAMEWORK

Although many reasons have been suggested, there has been no conclusive research investigating the reason why the South African public reject mega public sector projects

(Bulkeley and Mol 2003) through the lens of the governance or regulatory framework. The governance framework is "an organized structure established as authoritative within the institution, comprising processes and rules established to ensure projects meet their purpose" (Klakegg *et al*., 2008: 30). The Organization for Economic Co-operation and Development (OECD) has also defined the regulatory framework as including the three distinct but closely related elements of regulatory rules, regulatory bodies, and regulatory processes (Malyshev, 2010). The OECD's definition aligns with the UK Homes & Communities Agency's regulatory framework as comprising of regulatory requirements, codes of practice, and regulatory guidance (Homes & Communities Agency, 2015). This research seeks to fill this identified gap of previous researches by evaluating the reason why the public in South Africa resists mega public sector projects, using the regulatory framework as a conceptual framework. Unlike the existing studies that have investigated public protestation of mega projects in South Africa through discrete components, this study investigates the issue more holistically through the regulatory framework.

1. 3 PROBLEM STATEMENT

Against the backgrounds of increasing public protestation against mega projects in South Africa and the important role of regulatory framework arises an apparent problem. The prevalence of public resistance in the implementation of mega public sector projects in South Africa could imply dwindling levels of confidence of the public on the government agencies. It is based on this problem that this research sought to investigate the regulatory framework for mega projects in South Africa, which could also influence the monitoring and evaluation of mega public sector projects consultative process. This consultative process should entail public participation at all the stages of project implementation (Julie 2001; Li *et al*., 2013).

This can be achieved through a regulatory framework that specifies a number of evaluation criteria, including legislation, essential for effective public participation (Li *et al*., 2012; Rowe and Frewer, 2000). This study's contribution is on how the current regulatory framework in South Africa supports public consultation and what needs to be done to improve on its performance.

1.4 RESEARCH AIM

The aim of this research is to assess the regulatory framework of public consultation in mega projects in South Africa.

THE CENTRAL RESEARCH QUESTION

How articulated is South Africa's regulatory framework with regards to consultation in megaprojects?

1.5 RESEARCH OBJECTIVES

To achieve the research aim, the following objectives were established:

Objective 1: Investigate the role of the regulatory framework for consultation while implementing mega projects;

Objective 2: Assess the coordination of SA legislation within the three spheres of government with regards to consultation in infrastructure provision;

Objective 3: Investigate the monitoring regime in SA legislation in implementation mega projects;

Objective 4: Interrogate the interpretation of the legislation by government officials; and

Objective 5: Investigate the cause of public protestations against the implementation of mega projects.

1.6 RESEARCH QUESTIONS

Tied to the objectives and the central research question, the following questions were also established:

Question 1: What is the role of regulatory framework in inculcating consultation for mega projects?

Question 2: How is SA legislation coordinated within the three spheres of government?

Question 3: How is the monitoring of legislation in the implementing of mega projects?

Question 4: How do government officials interpret legislation?

Question 5: What is the cause of public protestations in implementing mega projects?

1.7 RESEARCH ASSUMPTIONS

Firstly, there is a problem in South Africa concerning the resistance of mega public sector projects by the public. The failure to consult the public in the implementation of the projects is the main cause of their opposition to the projects. Therefore, public agencies should recognise the need to consult the public in the implementation of mega public sector projects in South Africa.

Secondly, the prevailing problem regarding public resistance of the projects in the country emanates directly from the fact that they are ignored in the processes of developing and implementing the projects. Members of the public in South Africa feel alienated and disregarded in the implementation of the projects. This results in public resentment, opposition and resistance to the projects.

Thirdly, by resisting the projects, the public do not necessarily disapprove their essence, but also disagree with the process through which the projects are executed (Du Plessis 2008).

Public expectation is an imperative consideration when thinking about implementing a mega public sector project because failure to satisfy the expectations of members of the public generates resentment.

Lastly, the underlying problem of public resistance to mega public sector projects in South Africa is a function of consultation. In this regard, failure by the South African government to consult the public in the implementation of the projects is the main cause of the resistance and negative attitude. This is a major problem because it revolves around the success or failure of the implementation processes.

1.8 RESEARCH SCOPE AND DELINEATIONS

This study has focused on mega construction projects in South Africa with particular emphasis on the regulatory framework for implementing these projects. The increasing public protestation has been used as a proxy to justify that the existing regulatory framework being adopted is ineffectiveness, as this might have failed to consult the multiple stakeholders. From the scope, the following are delineations within this study:

a) SA-South Africa;
b) Public- General Citizens;
c) Consultation- Seeking the opinion of others;
d) Resistance- opposing projects;
e) Mega projects- major public projects;
f) Implementation- final launch or completion of major public projects;
g) Legal framework- the laws governing a certain area;
h) Regulatory framework- a system of offering checks and balances; and
i) Cultural entrenchment- an established system espoused by government and the public.

1.9 DISSERTATION STRUCTURE

This current Chapter 1 introduces this study; including background into public consultation, mega projects, public protestations on mega projects in South Africa, and the role of regulatory framework. This culminated in the problem statement, research aim, research objectives, and research questions. Chapter 1 also discusses the research assumptions, scope and delineations, and the structure of the subsequent chapters.

Chapter 2 reviews literature on the concepts central to this study, including public consultation, mega projects, and public protestation against mega projects. This led to review of literature related to the five objectives and questions of this study. These are roles of public consultation, including the coordination, monitoring, and interpretation of legislations to guard against protestations.

Chapter 3 discusses the methodology adopted for this research. Notably, it discusses and justifies the research design and method adopted, including the population and sampling technique used. The onion model was used to discuss the research philosophy, which are the assumptions underpinning the research strategy and methods. Chapter 3 also discusses the validity and reliability of the research instruments as well as ethics.

Chapter 4 discusses how the data collected for each of the objectives were analysed. Data for Objectives 1 to 4 were analysed deductively while the data for Objective 1 were analysed inductively.

The last Chapter 5 discusses the findings from the data analysed for each of the objectives to recommend and conclude for the study, including implications of the findings, limitations of the study, and recommendations for a future study.

CHAPTER 2: LITERATURE REVIEW

2.1 OVERVIEW

The study conducted a comprehensive investigation of all factors contributing to this scenario through the relevant processes of research including the evaluation of published literature, data collection, analysis and evaluations. Conclusions were made and suggestions offered at the end of the study. The entire evaluation was based on the hypothesis that the implementation of mega public sector projects in South Africa is resisted because of the lack of public consultation.

2.2 MEGA PUBLIC SECTOR PROJECTS

Mega public sector projects are public facilities that are designed for public service and good. The intention of these projects is to facilitate public activities and make life more convenient. Therefore, mega public sector projects are public enterprises that involve and are meant for the public. It is inconceivable for the design and implementation of these projects to be undertaken without the involvement of the public. According to Altshuler and Luberoff (2003), members of the public are the gist of mega public sector projects. Therefore, they ought to play the most important role in the design and implementation of those projects. Since the projects are designed for them, the public must be involved at every stage of development and implementation.

2.3 IMPLEMENTATION OF MEGA PUBLIC SECTOR PROJECTS

The implementation of mega public sector projects is the final stage in the project cycle prior to the use of the facilities. This process follows the planning, design and development stage. Implementation is one of the most important stages in the project cycle because it underscores the materialisation of the project ready for public use. The role of the public in the implementation of mega public sector projects is of great importance because it ensures the customisation of the project to suit the relevant specifications of the public. By alienating the involvement of members of the public in the implementation of mega public sector projects, public resistance for the projects is minimised (Pellizzoni, 2003).

2.4 PUBLIC CONSULTATION IN MEGA PUBLIC SECTOR PROJECTS

Public consultation in mega public sector projects is a very important aspect because it ensures that every stage of the project has the contribution of the public who are the custodians and targets of the projects. There should be deliberate and consistent efforts to involve the public in all mega public sector projects. According to Davies (2001), public involvement in mega public sector projects particularly at the implementation stage is important for various reasons and objectives. First is to ensure that the projects have the input of members of the public because they understand their needs and specifications better than any other person does. Therefore, their contribution is of great importance in developing the best method of implementation for successful and effective use.

Another potential reason for the involvement of the public is adherence to the regulations and policies that govern public projects. In accordance with the laws of public development, members of the public must be consulted in the process of creating and implementing all

mega public sector projects (Lehrer and Laidley, 2008). Moreover, members of the public should be consulted to assure their support in the entire process. When the public is ignored, it becomes difficult to win their support. The failure to consult the public could also result in opposition and resistance of the project.

Kerzner (2009) also affirmed that major public resistance to mega public sector projects in South Africa emanates directly from the failure to consult the public in the entire process of development and implementation of the projects. Members of the public feel left out and ignored when they are not consulted during the implementation of mega projects. Therefore, they react by opposing the projects. In most cases, the public resorts to opposition as a way of expressing their disappointment for the failure of the government to consult them when undertaking the projects (Gillham and MacLean 2002). The government and its relevant agencies ought to develop a systematic method of involving the public in mega public sector projects through comprehensive consultancy.

2.5 MANAGING STAKEHOLDERS IN PUBLIC CONSULTATION

The Project Management Institute (PMI) (2013) recently revised the "*A Guide to Project Management Body of Knowledge,* 5th Edition". Among its most important changes is the identification and inclusion of a 10th knowledge area in the form of Project Stakeholder Management (PSM). This emphasizes the importance of stakeholders to projects

According to the University of Natal (2015), legislation in South Africa demand that local development plans should include public consultations in matters such as environmental approval and land-use planning. Mega public sector projects in South Africa usually face

initial resistance from the public due to the notion that they can affect informal human settlement (Parnell and Oldfield 2004).

However, resistance to such projects decreases when the fruits of investments begin to manifest. The development of Gauteng City in South Africa is a point in case. According to Parnell and Oldfield (2004), Gauteng City is moving away from unplanned and sporadic housing developments. Although such mega projects usually face initial resistance, Parnell and Oldfield (2004) acknowledged that they are beneficial to the public in the long run when new jobs are created. They posited that city planners need not to consult the public when making greater investments that will ultimately be beneficial. They believed that such projects usually affect informal settlements and that the public will always explore any opportunity available to oppose them.

Nonetheless, the authors still acknowledged that city planners consider the interests of the public during planning. According to them, many questions linger concerning how city planners secure the interests of the public without consulting them. Although serious planning for mega projects usually stop private and municipal projects that are no longer desirable, partnership and participation is often prioritised (Parnell & Oldfield 2004). The planners of such mega projects never explain this partnership and participation. One of the most critical aspects that urban planners have been considering is the building of low-income houses for the majority of the poor people.

2.6 PRIORITISING STAKEHOLDERS DURING CONSULTATION

According to South Africa Info (2015), mega public sector projects in South Africa have traditionally been focusing on the interests of the rich people. However, low-income

developments are now being established, specifically in poverty-stricken human settlements (South Africa Info 2015). The mega housing projects are now being established in tandem with the interests of the general populace. In addition, amenities such as parks, health centres, schools and infrastructure are now been established in lieu of the demands of the common citizens. They add that the development of affordable housing projects in informal settlements have reduced resistance to mega public sector projects.

Cameron (2015) is not satisfied that public participation is taken into consideration when establishing mega public sector projects in South Africa. Cameron (2015) believed that there is no clear definition of the 'public' when doing the consultation. Many planners of mega public sector projects in South Africa often seek to consult players in the private sector. The author opined that public participation is wrongly construed when players in the private sector are considered as 'public' (Cameron 2015). Apart from this, the interests of the investors are prioritised and the social needs of the common citizens are never taken into account.

2.7 GOVERNANCE IN PUBLIC CONSULTATION

Identifying the key factors in urban governance helps in initiating interaction between public and private sector participation. Mega public sector projects can only be successful if knowledge is shared among different actors. According to Ramoshaba (2012), private enterprises create employment during such developments, with property developers promoting a growth agenda. This author thinks that mega public sector projects cannot be accomplished without consultations with critical players. The author observed that in South Africa, municipalities enjoy constitutional mandate to pursue economic development.

However, mega public sector projects are affected by conflicting agenda, suggesting that inclusive consultations are seldom made. Conflicts emanating from political and social spheres often affect the governance of such projects.

2.8 THE CONCEPT OF MEGA PROJECTS

To this point, numerical thresholds around $1 billion have been used to define megaprojects; however, the characteristics that elevate a project to mega-status are much more complex than simply project cost (Fiori and Kovaka, 2005). The wealth of any nation is gauged by its performance in infrastructure provision through its construction industry. The construction industry is large, volatile, and requires tremendous capital outlays. For developing economies, road construction constitutes a major component of the construction industry. This means that much of the national budget on infrastructure development is channelled to road construction projects (Kaliba, 2008). The "megaprojects paradox" is well illustrated by Flyvbjerg *et al*. (2014).

There exist strong needs for ever-increasing size of projects, such as the Channel Tunnel between U.K. and France, the Central Artery/Tunnel Project in Boston, MA, and the Oil Sands Projects in Alberta, Canada, to name a few. However, more often than not, the performances of such mega projects tend to be strikingly poor in terms of cost and time. For example, according to Flyvbjerg *et al*. (2014), the cost overrun happened in almost nine out of ten projects, and actual costs were, on average, 28% higher than the estimated cost. In many cases, a significant gap occurs between what is expected from the huge investment of resources and what is actually obtained from the project investment—the megaprojects paradox (Flyvbjerg, 2014).

A good example of how megaprojects could turn very costly is that of the English Channel that connects England to France via an underwater passageway. Although the project was supposed to cost $3.6 billion, the final cost amounted to $15 billion, which is almost five times the original budget (Rosenberg, 2014). In Africa, there are currently megaprojects that are being implemented, the total of which amounts to $222.7 billion

2.9 MEGA PROJECTS IN SOUTH AFRICA

Two of the largest projects, Medupi and Kusile– both in power stations– are being constructed in South Africa (Venter, 2014). To note, value for these projects are not only for local construction companies but also for the entire region that the two power stations are going to serve. Shortages in electricity will be avoided, which can have a big impact on the overall economy as business processes will not be interrupted by power failures.

Legal frameworks within South Africa are usually biased towards traditional public procurement laws, which usually hamper PPPs (Momsen 2004). According to Matthew Nell & Assoc (Pty) Ltd (2007), mega projects in South Africa operate in a different legal environment, making it difficult for the existence of appropriate PPPs. The private sector always desires to participate fully in mega public sector projects. Considering that the government controls public initiatives, the private sector believes that more needs to be done by the government to ensure its full participation (Nell 2011). According to Momsen (2004), South Africa needs to do more to promote PPPs through capacity building. Apart from this, the author says that the private sector feels that the rules of procurement for PPPs usually favour large groups. In addition, the smaller groups are denied an opportunity to engage in mega public sector projects.

2.9.1 PRIVATE SECTORS ON MEGA PROJECTS IN SOUTH AFRICA

However, even as the private sector seeks more recognition in the establishment and initiation of mega public sector projects, the implementing agencies feel that the sector is more concerned about making profits, rather than serving the interests of the public. In this sense, the involvement of the private sector in mega projects would result in poor services and higher prices. Nell (2011); thus, defends, the seeming, government monopoly of South Africa's mega projects. Providing equal opportunity for private and public sector in accordance with the PPPs principles is a difficult task. This is based on the realisation that the private sector may take long process in implementing the projects compared to the traditional government procurement. Therefore, it is quite difficult and complex to undertake procurement.

Involvement in infrastructure development within South Africa is a sensitive issue, which is the reason why there is always mistrust by government. According to Flyvbjerg *et al*. (2006), political leaders are always opposed to infrastructural development by the private sector because of the notion that the sector will destroy rather than create jobs. According to Blaser *et al*. (2004), the mega public sector projects initiated by the government are more likely to defend the interests of the common people. The authors also bring out the issue of transparency. They advanced that government procurement procedures are usually shrouded in secrecy.

In addition, the private sector usually subjects government procurement to extensive scrutiny, which may expose the government to criticism. Political leaders often desire to keep the private sector out of procurement procedures in order to avoid being micro managed. Therefore, legal parameters within South Africa are too strict for the involvement of the

private sector in mega public sector projects (Flyvbjerg, Bruzelius & Rothengatter 2006). The authors acknowledge that public-private partnership usually plays a significant role in infrastructural delivery. However, only 5% of the national infrastructure is planned and implemented through PPPs.

2.9.2 REGULATORY FRAMEWORK FOR MEGA PROJECTS IN SOUTH AFRICA

The Public Finance and Management Act (PMFA), and the Municipal Finance and Management Act (MFMA) define the legal frameworks that guide and regulate PPPs (Flyvbjerg *et al*., 2006). Many players within the private sector have considered these laws as being an impediment to their participation in mega public sector projects. According to Giddens *et al*. (2013), the legal parameters are too complex and time consuming. In addition, the difficulties to implement rest in their high transaction costs as well as their extended transaction times. The authors assert that the government is always protective of these legal frameworks. They acknowledge that most private sector players usually demand for special preferences and never go for competitive bidding.

The investment climate for mega projects in South Africa is hampered with suspicion, and that the government mistrusts the private sector. According to Sals **(**n.d**),** public participation in mega public sector projects is supported by the constitution. However, the country's perception towards infrastructural development is influenced by the apartheid past. Therefore, public participation in matters of infrastructural development is still at lower levels. However, public participation as exhibited in national law contradicts the reality on the ground (Giddens *et al*. 2013).

In the perspective of Kennedy *et al.* (2014), mega public sector projects are considered as private initiatives. In addition, the framework for infrastructure development allows promoters to keep project information as secretive as possible so as not to infringe the rights of private companies. According to the authors, most of the mega public sector projects in South Africa are shrouded in secrecy so as not to disrupt the tendering process. However, they consider this faulty, in view of the fact that even elected municipal councillors never understand the details of the projects. The fact that elected councillors are seldom aware of the details of the projects makes them lack the ability to make informed decisions. Apart from this, communities close to the projects are never consulted in any way.

2.9.3 COMPARING REGULATORY FRAMEWORKS IN SOUTH AFRICA AGAINST INTERNATIONAL PRACTICES

Public projects are often megaprojects and can cost millions, if not billions, of public funds like the planning of the 2010 World Cup in South Africa. As such, these projects will attract the attention of the people as they can impact the environment (for example reference to S.A. project), the communities, and the government's overall budget, etc. Thus, there is a need to conduct a thorough study on the project's direct and indirect impacts, as well as, the possible unintended consequences to various stakeholders.

Priemus *et al*. (2008) considered best practises that are employed during the establishment of mega public sector projects around the world and compared these practices to South Africa's. They analysed public, private partnerships (PPPs) and concluded that PPP allows for innovativeness in terms of operation, maintenance, design and construction. However, they found that South Africa lags behind in terms of PPPs. The secrecy surrounding government projects hinders the active participation of the private sector (Botha 2013). Botha also

discusses the best practices of PPPs and finds that the investment environment in South Africa fails to attract private sector participation.

According to Priemus *et al*. (2008), PPPs ensures the value for money, affordability as well as risk transfer. In world over, the authors acknowledges that governments usually transfer the risk of mega public sector projects to private players because they are best equipped to mitigate and manage them. Compared to South Africa, suspicion is always rife, which provides a poor working environment between the public and the private sectors (Holmes 2011). Effective management of mega public sector projects relies on the concepts of early planning and organisation, stakeholder communication and project controls integration and continuous improvement.

2.9.4 PLANNING AND ORGANIZATION IN PUBLIC SECTOR MEGA PROJECTS

According to Pillay *et al*. (2009), many mega public sector projects fail during the initial stages of planning and organisation. Poor organisation and planning costs results in inaccurate scheduling and cost estimates (Blas *et al*., 2011). Moreover, it may result in failure to implement subcontractor agreements and the commencement of the constructions even before the engineering works are completed. By considering the best practices that have been discussed earlier, an incisive overview of project challenges in South Africa is worth discussing, especially with respect to public protestation.

Pillay *et al*. (2009) also discussed the construction of FIFA world cup stadia in South Africa. The authors opined that the project was hampered with delays, overruns as well as shortage of skills. Apparently, the project also failed to adhere to best practises when the scope of the project changed with time (Haferburg and Huchzermeyer, 2015). The challenges within the

project were observed when different teams were used during the different stages of the project. Therefore, assigning a core team that remains within the project throughout the period of the assignment is important. This ensures transparency, responsibility as well as accountability. The constructors who were employed to construct the stadia delayed the project because they did not understand the designs and the procurement methods. This contradicted the best practices of mega project constructions, in which contractors are expected to have an in-depth understanding of critical aspects of their assignments in order to ensure proper coordination of the work.

2.10 REASONS FOR PUBLIC PROTESTATION IN SOUTH AFRICA

Consulting the public in the implementation of mega public sector projects is recognition of the fact that citizens in a democracy have rights and duties. A democratic government has a duty to ensure that the citizens are given an opportunity to participate actively in all projects that affect their lives (Holmes 2011). Therefore, South Africa, being a democracy can derive many benefits by consulting the public in the implementation of mega public sector projects. Many reasons have given for the non-consultation of the public while implementing public mega projects. The primary reason, it would appear, is dissatisfaction with the delivery of basic municipal services such as running water, electricity and toilets, especially in informal settlements. Unemployment (officially at around 23%), high levels of poverty, poor infrastructure, and the lack of houses add to the growing dissatisfaction in these and other poor communities. This comes in the wake of political promises during the election period that all or most of these issues will be addressed once the new government is in place (Roux, 2005).

Failure to consult the public in the implementation of public sector projects in South Africa has led to the opposition of major projects. For instance, members of the public have opposed greatly the e-tolling project by the South African National Road Agency (SANRAL). According to Holmes (2011), several avenues can be exploited in consulting the public before implementation of mega public sector projects from local to society settings. These include the NGOs (Non-Governmental Organisations), public service, legislatures, courts and incorporated entities among others. According to NRA (2015), many people were lured into protesting against the e-tolling project because they did not understand what tolling was or why it was important. In addition, NRA admits that these questions would have been answered favourably if consultation were done before implementation.

In the perspective of Holmes (2011), the people are likely to support the projects if they are consulted before the implementation is undertaken. The author construed that during the consultation, the people can be given an opportunity to question the purpose of public sector projects, including how they are going to be affected themselves. When they are given satisfying responses by the relevant government agencies, they are likely to support the projects (Holmes 2011).

For example, dams are often constructed to regulate water supply especially in areas where farmlands exist. Dams can provide a steady water supply even during seasons when rain is sparse. This project does not only benefit farmers, which is one of the stakeholders, but also others in the community, particularly if the dam will also be used to augment power supply in the area. However, there are also problems associated with the dams if communities located near the area will be affected because of its construction.

2.11 IMPACT OF SERVICE DELIVERY PROTEST IN SOUTH AFRICA

Community protests, many of them violent, increased markedly in South Africa in 2012, and showed no signs of abating as of the first quarter of 2013 as presented in the ensuing Figure 2.1. The protests are a manifestation of a lethal mix of scant employment opportunities, urban migration, and inequitable and sometimes dismal service delivery by local government. They are ignited by the resulting frustration of the instigators of the protests: usually young men, but also young women, located in poor black communities in both urban and rural areas.

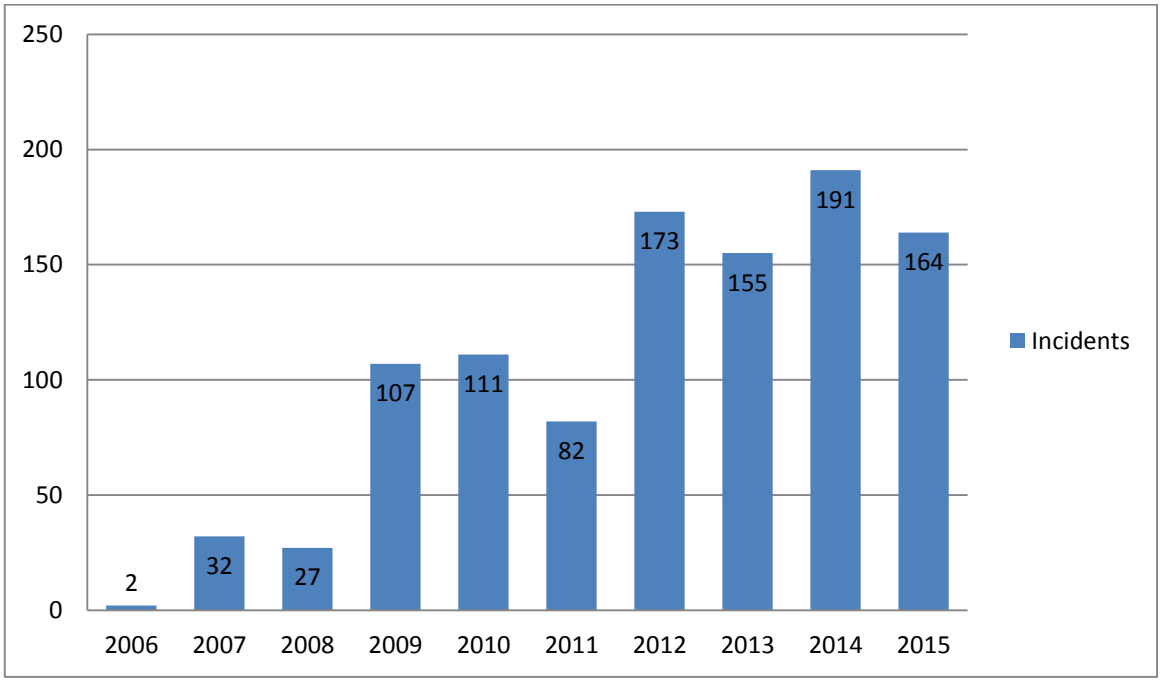


Figure 2.1: Service Delivery Protests in South Africa (Adapted from Times live, 2016)

The prevalence of these protests in recent years has led to the coining of the term "service delivery protests" - an explicit acknowledgement that needs and expectations of the most basic kind are not being met in municipalities across South Africa (Salgado, 2013). The following Figure 2.1 presents a graphical representation of service delivery protests in South

Africa from 2006 to 2015 (Times live, 2016). Gauteng and the Eastern Cape – 26% and 24% respectively - account for half of the protests; while the Free State accounted for just 1% of the recorded protests. According to the report, many of these protests have also taken place in informal settlements and underdeveloped areas where service delivery remains a major challenge. For the past few years, violent service delivery protests have been spreading across South Africa over access to basic services, such as water, electricity, housing and job opportunities. The report provides a gendered analysis of these events by focusing on Connell's (1995) notion of hegemonic masculinity, which refers to dominant cultural stereotypes in which men are expected to aspire to power, status, and wealth, and how these expectations are implicated in service delivery protests.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 OVERVIEW

Since methodology guides the conduct of a research, this chapter is focused on the techniques adopted in this research to advance knowledge about public consultation on public mega projects in a bid to prevent public protestation. It is premised on the specific procedures used in this scientific research, justified against the other available techniques. An overview of methodological trends in this research area is also presented, based on some existing similar studies to support the research methodology adopted in this present study.

3.2 THE METHODOLOGY AS FUNCTIONS OF DESIGN PHILOSOPHIES AND METHOD

Perry and Kraemer (1986) viewed methodology in different senses as including: (1) techniques; that is, the specific procedures used in a given science; (2) honorifics; that is, a ritual invocation attesting to concern over with meeting standards of scientific acceptability; and (3) epistemology, involving the most basic philosophical questions about the pursuit of truth. This resonates with Creswell's (2003: 6) position that "philosophically, researchers make claims about what is knowledge (ontology), how we know it (epistemology), what values go into it (axiology), how we write about it (rhetoric), and the processes for studying it (methodology)".

Mackenzie and Knipe's (2006) review of the two terms "methodology" and "method" concluded that methodology is the overall approach to research linked to the paradigm of theoretical framework while the method refers to systematic modes, procedures or tools used for collection and analysis of data. Roughly, research methodology encompasses the

philosophies of science and methods (Tan, 2011). Philosophy itself relates to the development and nature of knowledge, with an inherent assumptions about the what the world is viewed; hence, the research strategy and methods (Saunders *et al*., 2007)

3.3. RESEARCH PARADIGM

It is possible to construe the philosophy as the paradigm. From Mackenzie and Knipe (2006), the paradigm can be likened to the theoretical framework, the paradigm influences the way knowledge is studied and interpreted, and the choice of paradigm sets down the intent, motivation, and expectations for the research. The research paradigm precedes choices regarding methodology, methods, and research design. The common theoretical paradigms include positivist, (and post positivist), constructivist, interpretivist, transformative, emancipatory, critical, pragmatism and deconstructivist (Mackenzie and Knipe, 2006).

The onion model presented in the ensuing Figure 3.1 provides a systematic approach to examining the research philosophy including the theoretical paradigms. From Mackenzie and Knipe (2006), "the positivist or post positivist paradigm tends to predominantly use quantitative approaches (methods) to data collection and analysis, though not necessarily exclusive, while the interpretivist/constructivist paradigm generally operates using the predominantly qualitative methods… The pragmatic paradigm provides an opportunity for multiple methods, different world views, and different assumptions, as well as different forms of data collection and analysis in the mixed methods study."

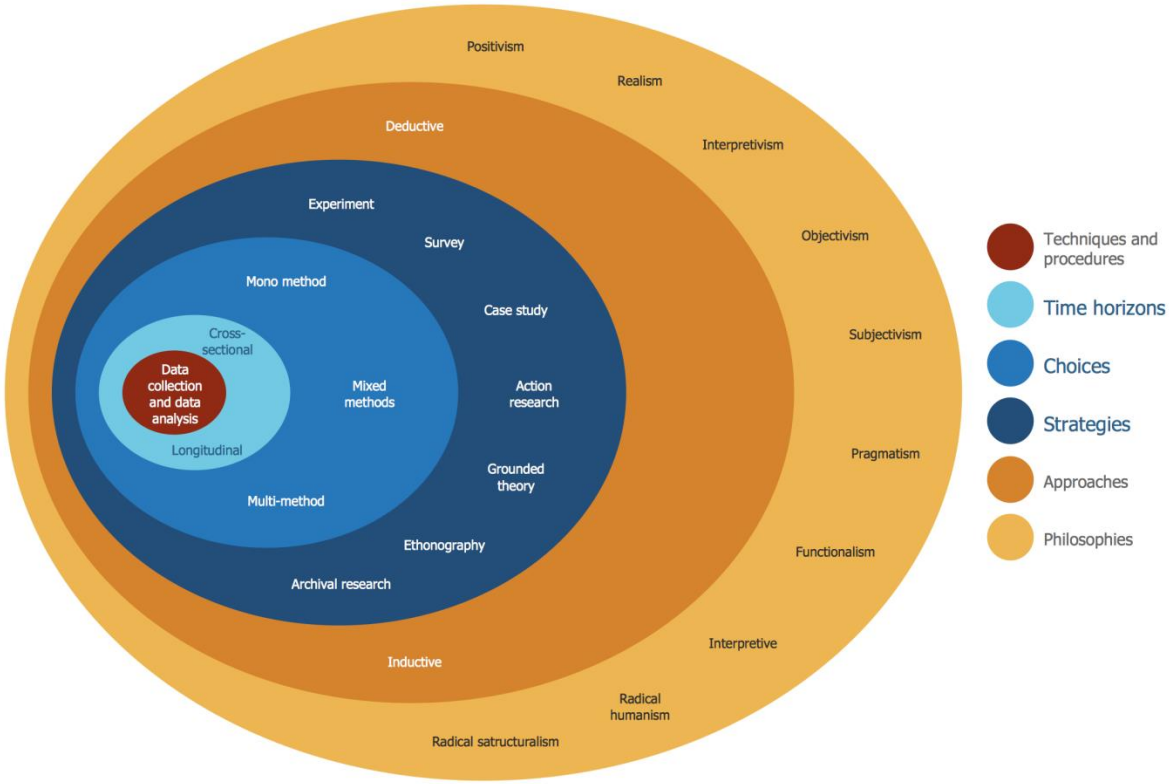


Figure 3.1: The research onion (adapted from Saunders *et al*., 2007: 102)

3.4 QUALITATIVE AND QUANTITATIVE RESEARCH

Concerning the research design, there persists the so-called paradigm wars in which researchers belong to the two distinct camps—interpretivism and positivism. The positivistic researchers' belief is that the social world consists of concrete and unchangeable reality which can be quantified objectively. Whereas, the interpretive researchers oppose the positivistic belief of reality; and argue that, instead, the reality is socially constructed by the humans which can be changed and understood subjectively (Corbetta, 2003; Kroeze, 2012; Marcon and Gopal, 2005).

For the first half of the twentieth century, the positivist model was dominant in social and educational research by giving importance of using standardised tests and systematic observation, experiment, survey data, and statistical analysis. In other words, the quantitative research method was quite powerful. However, after the 1960s, because of the influence of Kuhn's work, the new approaches—such as, symbolic interactionist ethnography, critical research, feminist, phenomenography, discourse analysis and other forms—came up into practice (Hammersley & Traianou, 2012).

That is to say, there was a shift of research methods from quantitative to qualitative, and the superiority of quantitative research was not as powerful as before. The growth of qualitative research was also from the unhappiness with the process of generating knowledge within the positivistic research (Sandberg, 2005). Alongside the research methods and approaches, ethical considerations were also introduced in the research world though it was subsequent to research methods and approaches

The research paradigm and research question determine which research data collection and analysis methods (qualitative/quantitative or mixed methods) will be most appropriate for a study (Mackenzie and Knipe, 2006). It is now well established that "the debate between quantitative and qualitative research is divisive and, hence, counterproductive for advancing the social and behavioural science field" (Onwuengbuzie and Leech, 2005: 268). While some paradigms may appear to lead a researcher to favour qualitative or quantitative approaches, in effect no paradigm actually prescribes or prohibits the use of either methodological approach – qualitative and quantitative methods are complementary (Mackenzie and Knipe, 2006).

3.5 RESEARCH PHILOSOPHY

From the preceding discussions, the research philosophy adopted in this study is pragmatic. Subsequently, it is premised on the quantitative and qualitative research approaches in order to fulfil its objectives. Research design is the tactic that will be implemented for elucidating the research problem; thus, it is essential that the research design tis the most suitable to the stated research problem and the nature of the data that will be collected (Leedy and Ormrod, 2005). Building on the earlier discussion, research methodology may also be described as the way in which the data will be collected (Nieawoudt, 2011). It is also "a systematic process for gathering and interpreting data" (Johnson, 2002: 4).

Overall, research design and methodology is purely a systematic approach to solving the research problem identified. The purpose of the research design and methodology is to describe and explain the research methodology adopted in a research study. This has influenced Mackenzie and Knipe's (2006) view of a paradigm as including three elements: a belief about the nature of knowledge, a methodology and criteria for validity. These three elements are expounded subsequently using Saunders *et al.*'s (2007) onion model to discuss the methodological choice adopted in this study.

The onion model provides a cyclical view of the research process, unlike Mackenzie and Knipe's (2006) research process that could be misconstrued for a linear process, despite also serving the same purpose as Saunders *et al.*'s (2007) onion model. The onion depicts the issues underlying the choice of data collection techniques and analysis procedures. They are important issues (i.e., layers) that need to be addressed (i.e., peeled away) before coming to the central point or research question (i.e. centre of the onion).

3.6 RESEARCH METHODOLOGICAL CHOICE

It was not within the scope of this study to present all the available choices within each layer of the onion (see Mackenzie and Knipe, 2006; Saunders *et al*., 2007). The approach was to discuss and justify the choices adopted as compared to the other choices. The justifications were premised on the research questions posed in this study and which were related to the objectives (please refer to Chapter 1).

3.6.1 RESEARCH PHILOSOPHY ADOPTED

The first layer of the onion model focuses on the philosophies. The ten philosophies identified, and which can be cross-referenced with those identified by Mackenzie and Knipe (2006), include: Positivism, Realism, Interpretivism, Objectivism, Subjectivism, Pragmatism, Functionalist, Interpretive, Radical humanist, and Radical structuralist. This study adopted pragmatism because the research questions "do not suggest unambiguously that either a positivist [i.e., observable social reality] or interpretivist [i.e., rich insights into the unobservable] philosophy is adopted" (Saunders *et al*., 2007: 110). The data that were to be collected to answer the research questions suggested positivist and interpretivist stances; hence, the choice of pragmatism.

3.6.2 RESEARCH APPROACH ADOPTED

The second layer of the onion focuses on the approaches. The two approaches identified include: Deductive and Inductive. This study adopted the inductive approach because the aim of this study was to assess the regulatory framework of public consultation in mega projects

in South Africa. The aim was based on the overarching assumption that the resistance of mega public sector projects is due to the failure to consult the public in the implementation of the projects and which can be linked to the existing regulatory framework. The research questions were, as a result, for "building theory", which is the premise of the inductive approach rather than "testing theory", which is the premise of the deductive approach. In the deductive approach, theory would follow data (Saunders *et al*., 2007: 118)

3.6.3 RESEARCH STRATEGY ADOPTED

The third layer of the onion focuses on the strategies. The seven strategies identified include: Experiment, Survey, Case study, Action research, Grounded theory, Ethnography, and Archival research. For research questions 1 to 4 and which were related to Objectives 1 to 4, survey was adopted. Surveys are used to "explore particular issues, describe phenomena, determine preferences, and ascertain reasons" (Tan, 2011: 31). While "the survey strategy is usually used with the deductive approach, the data collected using a survey strategy can, nonetheless, be used to suggest possible reasons for particular relationships between variables and to produce models of these relationships" (Saunders *et al*., 2007: 138). Case study strategy was adopted for Objective 5 because they are used to probe a smaller number of cases in depth (Saunders *et al*., 2007; Tan, 2011).

3.6.4 RESEARCH CHOICE ADOPTED

The fourth layer of the onion focuses on the choices. The three choices identified include: Mono method, Mixed methods, and Multi-method. Research designs (e.g., case studies,

surveys, experiment, etc.) should not be mixed with methods of data collection using instruments such as questionnaires, interviews, and observations (Tan, 2011). The main method of data collection adopted in this study is the questionnaire used during the survey to collect quantitative data and documented accounts of mega projects in South Africa used to extrapolate qualitative data.

As a result, the mixed methods choice was used as supported by Saunders *et al*.'s (2007: 145) position that it is "when both quantitative and qualitative data collection techniques and analysis procedures are used in a research design". Since the data collection techniques and analysis procedures were, however, not performed at the same time (i.e., parallel) but rather one after the other (sequential), it accorded well with Saunders *et al*.'s (2007: 146) position that in mixed method research, quantitative data are analysed quantitatively and qualitative data are analysed qualitatively.

3.6.5 RESEARCH TIME HORIZON ADOPTED

The fifth layer of the onion focuses on the time horizons. The two time horizons identified include: Cross-sectional and Longitudinal. Due to time constraints and, primarily, the need to present a case for the aim of this study, the phenomena surrounding the research questions were investigated at a particular time; that is, cross-sectional and which is associated with the survey strategy (Saunders *et al*., 2007; Tan, 2011). This contrasts with the longitudinal time horizon that is used to study change and development, even with time constraints since the central question lies in answering the question of whether there has been any change over a period of time. A cross-sectional study gathers information about a population at a particular time; hence, the chosen time horizon in this research.

3.6.6 DATA COLLECTION AND DATA ANALYSIS ADOPTED

The sixth and final layer of the onion focuses on the techniques and procedures of the research. The two areas covered include: Data collection and Data analysis. Depending on the research questions to be answered, it is possible to either generate new information from the existing ones by analysing existing data or collecting new data specifically for the research question(s). Existing data constitute secondary data while new data constitute primary data as now discussed in more detail in the subsequent sections.

3.6.6.1 PRIMARY DATA AND SECONDARY DATA

Primary data refers to the first-hand information gathered, assembled and issued for a particular purpose (Tan, 2011; Saunders *et al*., 2007). Primary data are usually collected from the participants by the investigator through questionnaires. In view of the fact that it is collected from new sources for particular purposes it will entail collection of data by the investigator from individual observations as well as experiences (Rahman, 2017).

Secondary data are the pieces of information previously collected by another investigator for a particular purpose and, subsequently, readily accessible for new research study (Tan, 2011; Saunders *et al*., 2007). This data are initially collected for diverse use and at diverse time. In essence, secondary data from books, newspaper, journals policy briefs and reports has been used in the development of literature review (Rahman, 2017).

Primary data were collected to answer research questions 1 to 4 (related to Objectives 1 to 4) while secondary data were analysed to answer research questions 5 (related to Objective 5). It can be concluded that reliability, validity, and generalisability are central to the decisions underpinning data collection and data analysis as now discussed subsequently.

3.6.6.2 RELIABILITY, VALIDITY, AND GENERALISABILITY

Golafshani (2003: 598, 601, 602) surmised that "reliability and validity are tools of an essentially positivist epistemology" to buttress that, in qualitative research, reliability covers that which helps to "understand a situation that would otherwise be enigmatic or confusing" and validity as "rather a contingent construct, inescapably grounded in the processes and intentions of particular research methodologies and projects". Reliability is the extent to which data collection techniques or analysis procedures will yield consistent findings while validity is about whether the findings are really about what they appear to be about (Saunders *et al*., 2007: 149-150).

The overarching conclusion among qualitative researchers has been that, firstly, "since there can be no validity without reliability, a demonstration of the former [validity] is sufficient to establish the latter [reliability]" (Golafshani, 2003: 601). Secondly, "the issues of reliability, validity, trustworthiness, quality and rigor are meant to differentiate a 'good' from a 'bad' research; thus, important to the research in any paradigm" (Golafshani, 2003: 602). Beyond reliability and validity, generalizability constitutes a form of external validity because it concerns itself with the extent to which research results can be generalised (Saunders *et al*., 2007; Tan, 2011).

In addition to data collection and interpretation, generalizability considers identifying the research population and how to drawing a sample, where it is impossible/impracticable to collect data from the entire population (Saunders *et al*., 2007). The research population, sampling techniques, and methods of data collection and interpretation are now discussed in the immediate subsequent sections.

3.7 POPULATION

Target population refers to a general set of the examination of all participants of real or supposed set of objects, people and events to which a researcher wishes to study (Berg and Lune 2014). The population encompassed members of the South African government departments and state owned entities. However, the actual population size could not be determined because there is no sampling frame for such a population, making it difficult to identify population members (Handcock *et al*., 2014; Heckathorn, 1997; Salganik and Heckathorn, 2004). Generating a representative sampling frame for this population requires a more thoughtful approach so as not to affect the validity, reliability, and generalizability of the study. Markov chain theory is being adopted, increasingly, to derive population estimates and sampling weights for such a population (see Schonlau and Liebau, 2012).

3.8 SAMPLING PLAN

The difficulty of gaining access to the targeted population influenced the need to sample a few, who could represent the entire population (Saunders *et al*., 2007: 206). Sampling plan denotes a procedure where a small number of incidences, people or, objects chosen and analysed to discover something regarding the entire target population (Berg & Lune 2014). A sample is a small percentage of targeted population chosen using some orderly structure. From Saunders et al.'s (2007: 207) overview of the two sampling techniques, they include probability or representative sampling and non-probability or judgemental sampling.

The probability sampling techniques include: Simple random, Systematic, Stratified, random, and Cluster. These four can be undertaken in a multi-stage. The non-probability sampling

techniques include: Quota, Purposive, Snowball, Self-selection, and Convenience. This study applied the stratified random sampling technique by "dividing the population into two or more relevant and significant strata based on one or a number of attributes" (Saunders *et al*., 2007: 221). Therefore, "the sampling frame is divided into a number of subsets from which a random sample (simple or systematic) is then drawn from each of the strata to ensure that each of the strata is represented proportionally within the sample" (Saunders *et al*., 2007: 221) as presented in the ensuing Table 3.1. This systematic approach to generating the sampling frame makes the sampling technique different from the purposive sampling and analogous of the mixed methods sampling technique (see Teddlie and Yu, 2007).

Table 3.1 Sample Size

Population Category	**Sampling Frame**	**Target Participants**
Municipality technical staff	40	16
Project Managers (both private and public sector)	40	16
Consulting Engineers	40	16
State owned companies (Eskom and Transnet)	40	16
Total	**160**	**64**

3.9 RESEARCH ETHICS AND PROCEDURE

The research topic and procedure were guided by ethical considerations. The general ethical issue was that the research should not subject the target participants to any embarrassment

and/or harm. To ensure this was achieved, ethics application was submitted to the university and clearance was obtained (please refer to Annexure 1).

The research entailed administering structured questionnaires (please refer to Annexure 2) among the target participants. This is because questionnaires are not only expedient but also more effective in collecting and compiling data for this study. The respondents were given sufficient time to fill the e-mailed questionnaires.

The use of closed ended questions was to ensure that the responses offered are applicable to the study (i.e., primary data). The questionnaires were self-administered by the respondents, which also allowed for privacy. Since a mixed method was used as the research choice in other to obtain quantitative and qualitative data, data collection and analyses were performed sequentially as discussed next.

3.10 DATA ANALYSIS

Data collected with the questionnaire were used to achieve Objectives 1 to 4. The findings were then analysed against existing reports on public protestation of mega projects in South Africa to achieve Objective 5. This means the findings from Objectives 1 to 4 were triangulated to investigate causes of public protestation on mega projects in South Africa to achieve Objective 5. This is depicted in the ensuing Figure 3.2, which revealed that quantitative data were collected with respect to Objectives 1 to 4 while qualitative data were collected with respect to Objective 5. These are discussed in depth at the next chapter.

Ranked (or ordinal) data were collected with respect to Objectives 1 to 4. Descriptive data is different from the ordinal data in that it is impossible to define the category numerically or to rank it (Saunders *et al*., 2007: 409). The ranked data collected for Objectives 1 to 4 were analysed using the frequency distribution and measures of dispersion. The purely qualitative

data collected for Objective 5 were analysed inductively as against grounded theorising (see Hammersley, 2010) since the intention was to generate a theory and a direction for future work (Saunders *et al*., 2007: 492). The theory in this case is the cause of public protestations against the implementation of mega projects in South Africa.

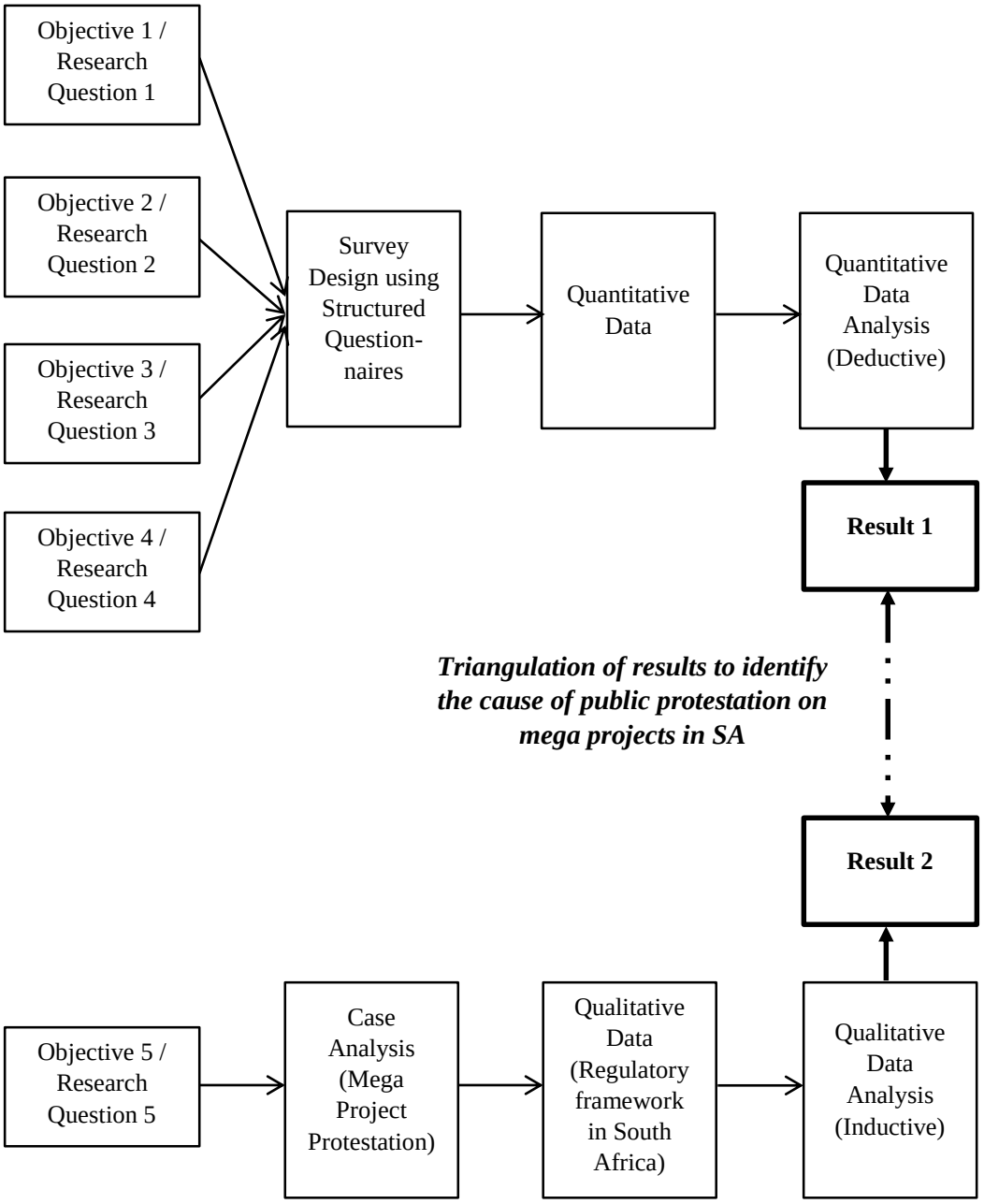


Figure 3.2: The research process and data analysis

CHAPTER 4: DATA ANALYSIS AND INTERPRETATION

4.1 OVERVIEW

This chapter presents the analyses of the data collected to achieve the five objectives of this study. It starts with discussions on the response rate and characteristics of the respondents before presenting a summary of the findings for each of the objectives following the sequence of the research process followed as discussed in the preceding chapter.

4.2 RESPONSE RATE

Out of the 64 questionnaires that were distributed to the potential participants, who were mainly consulting engineers and project managers working for government departments, 37 completed questionnaires were returned. In addition to the 58% response rate, permission was also sought from and granted by the supervisor to proceed with data analysis. The subsequent data analysis and interpretation are based on the total of the resulting 37 participants as mentioned above and the analysis is as per the graphs and tables discussed subsequently.

4.3 RESPONDENTS' PROFILE

Corresponding to Section 1 of the questionnaire, from Table 4.1 and Figure 4.1, it can be observed that majority of respondents were male at 26 and female at 11, which can be attributed to the construction industry being, historically, male dominated.

Table 4.1: Respondents' Gender

Description	Frequency	Percent	Valid Percent	Cumulative Percent
female	11	29.7	29.7	29.7
male	26	70.3	70.3	100.0
Total	37	100.0	100.0	

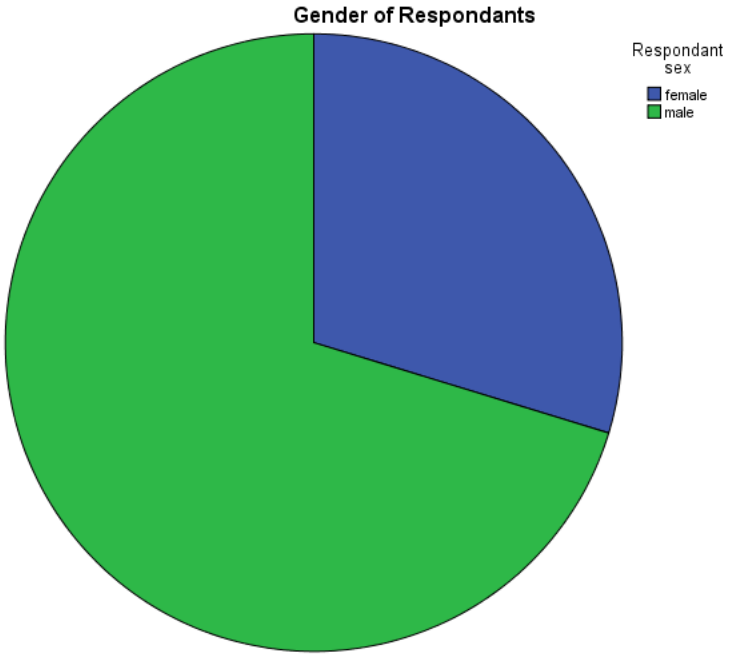


Figure 4.1: Respondents' Gender

From Table 4.2 and Figure 4.2, it can be observed that majority of the respondents were in the age range 30 to 40 years at 27 respondents and age ranges 18 to 29 as well as 50 and above at 5 respondents each. This indicated that majority of the people who participated can be considered matured and experienced people in the construction industry.

Table 4.2: Respondents' Age Range

Description	Frequency	Percent	Valid Percent	Cumulative Percent
18 to 29	5	13.5	13.5	13.5
30 to 49	27	73.0	73.0	86.5
50 and above	5	13.5	13.5	100.0
Total	37	100.0	100.0	

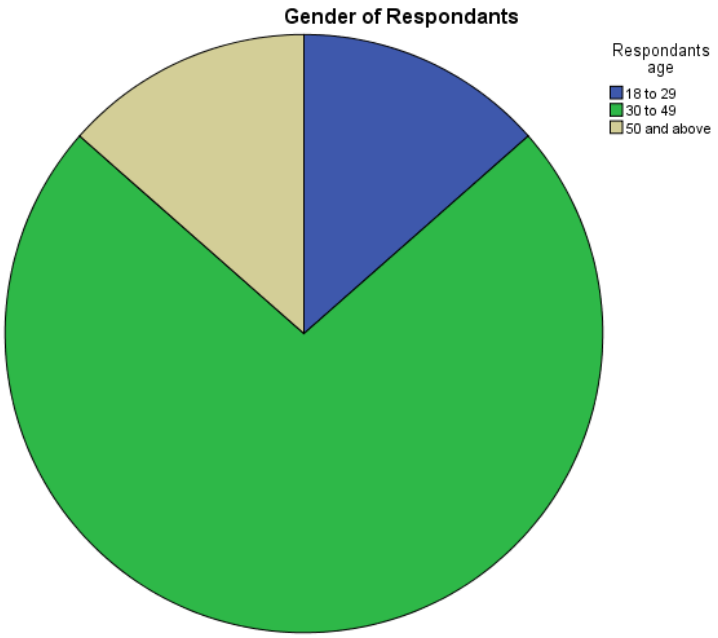


Figure 4.2: Respondents' Age Range

From Table 4.3 and Figure 4.3, it can be observed that majority of the respondents were university graduates with the highest percentage at 31 (83.8%) and the lowest being college at 6 (16.2%)

Table 4.3: Respondents' Academic Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	College	6	16.2	16.2	16.2
	University	31	83.8	83.8	100.0
	Total	37	100.0	100.0	

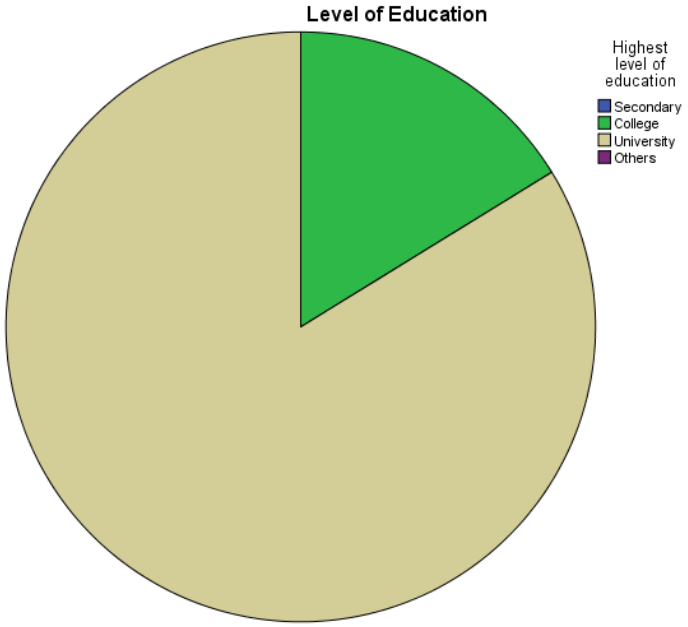


Figure 4.3: Respondents' Academic Qualifications

4.4 SOUTH AFRICAN REGULATORY FRAMEWORK IN INCULCATING PUBLIC CONSULTATION FOR MEGA PROJECTS IMPLEMENTATION

For Section 2 of the questionnaire, which sought for data to answer the research questions and, by so doing, to achieve the objectives, the ensuing discussions present the findings for the variables measured for Objective 1.

4.4.1 PUBLIC CONSULTATION IS AN INHERENT PART OF IMPLEMENTATION PROCESS

The following Table 4.4 presents the findings for this first variable (V_1) measured under Objective 1. It also indicates the frequency distribution including the mean score (5 being the maximum) and standard deviation, as a measure of dispersion (the closer to 0, the less the dispersion or spread of opinion).

Table 4.4: Public consultation is an inherent part of implementation process

Rating	Frequency	Percent	Mean	Standard Deviation
Disagree (2)	3	8.1		
Neutral (3)	1	2.7		
Agree (4)	19	51.4	4.19	0.84
Strongly agree (5)	14	37.8		
Total	37	100.0		

As revealed, majority of respondents at 51.4% agreed that public consultation is an inherent part of implementation process. 37.8% also strongly agreed with the statement with the position.

4.4.2 PUBLIC CONSULTATION IS THE SINGLE-MOST FACTOR IN IMPROVING IMPLEMENTATION

The following Table 4.5 presents the findings for this second variable (V_2) measured under Objective 1. It also indicates the frequency distribution including the mean score and standard deviation, as a measure of dispersion.

Table 4.5: Public consultation is the single most important factor in improving implementation

Rating	Frequency	Percent	Mean	Standard Deviation
Disagree (2)	5	13.5		
Neutral (3)	15	40.5		
Agree (4)	12	32.4	3.46	0.90
Strongly agree (5)	5	13.5		
Total	37	100.0		

As revealed, majority of the respondents (40.5%) were neutral that public consultation is the single-most factor in improving implementation of mega projects. This means there are or could be other factors.

4.4.3 PUBLIC CONSULTATION IN THE IMPLEMENTATION OF MEGA PROJECTS BOOSTS IMPLEMENTATION

The following Table 4.6 presents the findings for this third variable (V_3) measured under Objective 1. It also indicates the frequency distribution including the mean score and standard deviation, as a measure of dispersion.

Table 4.6: Public consultation in implementation of mega projects boosts implementation

Rating	Frequency	Percent	Mean	Standard Deviation
Disagree (2)	1	2.7		
Neutral (3)	4	10.8		
Agree (4)	12	32.4	4.38	0.79
Strongly agree (5)	20	54.1		
Total	37	100.0		

4.4.4 EFFECTIVE IMPLEMENTATION IS A FUNCTION OF PUBLIC CONSULTATION

The following Table 4.7 presents the findings for this fourth variable (V_4) measured under Objective 1. It also indicates the frequency distribution including the mean score and standard deviation, as a measure of dispersion.

Table 4.7: Effective implementation is a function of public consultation

Rating	Frequency	Percent	Mean	Standard Deviation
Disagree (2)	1	2.7		
Neutral (3)	6	16.2		
Agree (4)	19	51.4	4.08	0.76
Strongly agree (5)	11	29.7		
Total	37	100.0		

4.4.5 DOES THE SOUTH AFRICA REGULATORY FRAMEWORK IN INCULCATING PUBLIC CONSULTATION FOR MEGA PROJECTS IMPLEMENTATION INFLUENCE THE SUCCESS OF PROJECTS?

The following Table 4.8 presents the findings for this fifth variable (V_5) measured under Objective 1. Being a binary operation, it only indicates the frequency of the two options provided to the respondents. Majority of respondents agreed with the statement.

Table 4.8: Does the South African regulatory framework in inculcating public consultation for mega projects implementation influence the success of the projects

Rank	Frequency	Percent	Cumulative Percent
Yes	31	83.8	83.8
No	6	16.2	100.0
Total	37	100.0	

4.5 DOES THE SOUTH AFRICAN LEGISLATION WITHIN THE THREE TIERS OF GOVERNMENT (NATIONAL, PROVINCIAL AND LOCAL GOVERNMENT) PROMOTES PUBLIC CONSULTATION IN IMPLEMENTING MEGA PROJECTS?

From Section 3 of the questionnaire, the ensuing discussions present the findings for the variables measured for Objective 2. Similar to the first objective, it presents the findings for the variables measured under the second objective. It also indicates the frequency distribution including the mean score and standard deviation.

4.5.1 PUBLIC CONSULTATION WITHIN THE THREE TIERS OF GOVERNMENT PROMOTES PUBLIC CONSULTATION IN MEGA PROJECTS IMPLEMENTATION

The following Table 4.9 presents the findings for this first variable (V_1) measured under Objective 2. It also indicates the frequency distribution including the mean score and standard deviation, as a measure of dispersion.

Table 4.9: The national, provincial and local governments support public consultation

Rating	Frequency	Percent	Mean	Standard Deviation
Strongly disagree (1)	1	2.7		
Disagree (2)	1	2.7		
Neutral (3)	4	10.8	4.11	0.91
Agree (4)	18	48.6		
Strongly agree (5)	13	35.1		
Total	37	100.0		

Majority of the respondents at 48.6 % agreed and another at 35.1% strongly agreed that the three tiers of government support public consultation as enshrined in the constitution.

4.5.2 PUBLIC CONSULTATION IS AT THE CENTRE OF LEGISLATION IN THE THREE TIERS OF GOVERNMENT

The following Table 4.10 presents the findings for this second variable (V_2) measured under Objective 2. It also indicates the frequency distribution including the mean score and standard deviation, as a measure of dispersion.

Table 4.10: Public consultation is at the centre of legislation in the three tiers of government

Rating	Frequency	Percent	Mean	Standard Deviation
Disagree (2)	3	8.1		
Neutral (3)	5	13.5		
Agree (4)	20	54.1	3.95	0.85
Strongly agree (5)	9	24.3		
Total	37	100.0		

Majority of the respondents (54.1%) agreed while another 24.3% strongly agreed that public consultation is at the centre of legislation in the three tiers of government.

4.5.3 PUBLIC CONSULTATION IS GIVEN PREFERENCE IN LEGISLATION OF NATIONAL, PROVINCIAL AND LOCAL GOVERNMENTS

The following Table 4.11 presents the findings for this third variable (V_3) measured under Objective 2. It also indicates the frequency distribution including the mean score and standard deviation, as a measure of dispersion.

Table 4.11: Public consultation is given preference in the legislations of national, provincial and local governments

Rating	Frequency	Percent	Mean	Standard Deviation
Disagree (2)	3	8.1		
Neutral (3)	7	18.9		
Agree (4)	15	40.5	3.97	0.97
Strongly agree (5)	12	32.4		
Total	37	100.0		

4.5.4 How would you rate the South Africa legislation within the three tiers of government (national, provincial and local) in promoting public consultation in implementing mega projects?

The following Table 4.12 presents the findings for this fourth variable (V_4) measured under Objective 2. It also indicates the frequency distribution including the mean score and standard deviation, as a measure of dispersion.

Table 4.12: Rate Legislation in Government (Local, Prov., Local)

Rating	Frequency	Percent	Mean	Standard Deviation
Excellent (4)	7	18.9		
Good (3)	21	56.8	2.86	0.82
Fair (2)	6	16.2		
Poor (1)	3	8.1		
Total	37	100.0		

Majority of respondents (56.8%) indicated that SA legislation is good while another 18.9% indicated that the legislation in South Africa is highly rated but lacks monitoring and evaluation.

4.6 THE MONITORING REGIMEN IN SOUTH AFRICAN LEGISLATION IMPLEMENTATION OF MEGA PROJECTS

From Section 4 of the questionnaire, the ensuing discussions present the findings for the variables measured for Objective 3. Similar to the previous objectives, it presents the findings for the variables measured under the third objective. It also indicates the frequency distribution including the mean score and standard deviation.

4.6.1 THE CURRENT LEVEL OF MONITORING GUARANTEES PUBLIC CONSULTATION IN PROJECT IMPLEMENTATION

The following Table 4.13 presents the findings for the first variable (V_1) measured under Objective 3. It also indicates the frequency distribution including the mean score and standard deviation, as a measure of dispersion.

Table 4.13: Monitoring public consultation

Rating	Frequency	Percent	Mean	Standard Deviation
Disagree (2)	6	16.2		
Neutral (3)	13	35.1		
Agree (4)	14	37.8	3.43	0.90
Strongly Agree (5)	4	10.8		
Total	37	100.0		

16.21% of the respondents disagreed with the current monitoring and evaluation while another 35.14% were neutral about the current monitoring and evaluation, a cumulative of 51.4%. This indicated that the respondents were clearly not satisfied with the current monitoring and evaluation which means something must be do to improve monitoring.

4.6.2 PUBLIC PARTICIPATION WOULD BE BOOSTED BY THE EFFECTIVE MONITORING REGIMEN

The following Table 4.14 presents the findings for the second variable (V_2) measured under Objective 3. It also indicates the frequency distribution including the mean score and standard deviation, as a measure of dispersion.

Table 4.14: Participation boosted by effective monitoring

Rating	Frequency	Percent	Mean	Standard Deviation
Disagree (2)	1	2.7		
Neutral (3)	3	8.1		
Agree (4)	17	45.9	4.30	0.74
Strongly Agree 5)	16	43.2		
Total	37	100.0		

A total number of 33 participants (89.19%) either agreed (45.95%) or strongly agreed (43.24%) that public participation is boosted by effective monitoring. This confirmed that effective monitoring can boost participation.

4.6.3 THE CURRENT MONITORING REGIMEN SHOULD BE GREATLY IMPROVED

The following Table 4.15 presents the findings for the third variable (V_3) measured under Objective 3. It also indicates the frequency distribution including the mean score and standard deviation, as a measure of dispersion.

Table 4.15: Current Monitoring should be Improved

Rating	Frequency	Percent	Mean	Standard Deviation
Disagree (2)	1	2.7		
Neutral (3)	4	10.8		
Agree (4)	16	43.2	4.27	0.77
Strongly Agree (5)	16	43.2		
Total	37	100.0		

32 participants (86.49%) either agreed (43.24%) or strongly agreed (43.24%) that the current monitoring of public consultation should be gradually improved. This indicated a desire for an improvement in the current monitoring arrangement.

4.6.4 How would you rate the monitoring regimen in SA legislation of mega projects?

The following Table 4.16 presents the findings for this fourth variable (V_4) measured under Objective 3. It also indicates the frequency distribution including the mean score and standard deviation, as a measure of dispersion.

Table 4.16: How do you rate Monitoring System of Mega Projects in South Africa

Rating	Frequency	Percent	Mean	Standard Deviation
Excellent (4)	4	10.8		
Good (3)	19	51.4		
Fair (2)	7	18.9	2.54	0.93
Poor (1)	7	18.9		
Total	37	100.0		

A total of 14 respondents (37.84%) rated the monitoring of legislation as either fair (18.92%) or poor (18.92%). This underscored weaknesses of the monitoring of legislation for public consultation.

4.7 THE INTERPRETATION OF SA LEGISLATION BY GOVERNMENT OFFICIALS

From Section 5 of the questionnaire, the ensuing discussions present the findings for the variables measured for Objective 4. Similar to the previous objectives, it presents the findings for the variables measured under the third objective. It also indicates the frequency distribution including the mean score and standard deviation.

4.7.1 THE CURRENT LEVEL OF MONITORING GUARANTEES PUBLIC CONSULTATION IN PROJECT IMPLEMENTATION

The following Table 4.17 presents the findings for the first variable (V_1) measured under Objective 4. It also indicates the frequency distribution including the mean score and standard deviation, as a measure of dispersion.

Table 4.17: Interpretation of legislation by Government Officials

Rating	Frequency	Percent	Mean	Standard Deviation
Disagree (2)	2	5.4		
Neutral (3)	4	10.8		
Agree (4)	24	64.9	3.22	1.20
Strongly Agree (5)	7	18.9		
Total	37	100.0		

Majority of the respondents (64.9% indicated the interpretation of legislation by government officials should allow for public consultation in project implementation.

4. 7.2 THE INTERPRETATION OF LEGISLATION BY GOVERNMENT OFFICIALS INCONGRUENT WITH INTERNATIONAL BENCHMARKS.

The following Table 4.18 presents the findings for the second variable (V_2) measured under Objective 4. It also indicates the frequency distribution including the mean score and standard deviation, as a measure of dispersion.

Table 4.18: Interpretation of Legislation by government officials incongruent with International benchmarks

Rating	Frequency	Percent	Mean	Standard Deviation
Strongly Disagree (1)	1	2.7		
Disagree (2)	4	10.8		
Neutral (3)	14	37.8	3.51	1.02
Agree (4)	11	29.7		
Strongly Agree (5)	7	18.9		
Total	37	100.0		

The majority of the respondents (67.57%) were either neutral (37.84%) or agreed (29.73%) that interpretation of legislation by government officials is incongruent with international benchmarks.

4.7.3 THE COMMON AND OFFICIAL INTERPRETATION OF LEGISLATION BY GOVERNMENT OFFICIALS IS NEEDED TO BOOST EFFECTIVE IMPLEMENTATION.

The following Table 4.19 presents the findings for the third variable (V_3) measured under Objective 4. It also indicates the frequency distribution including the mean score and standard deviation, as a measure of dispersion.

Table 4.19: Common Interpretation needed to boost effective Implementation

Rating	Frequency	Percent	Mean	Standard Deviation
Neutral (3)	2	5.4		
Agree (4)	16	43.2		
Strongly Agree (5)	19	51.4	4.46	0.61
Total	37	100.0		

Most of the respondents (51.4%) agreed (43.24%) and strongly agreed (51.35%) that common interpretation is needed to boost effective implementation. This can further be supported by the standard deviation of 0.61 (the lowest among all the variables).

4.7.4 HOW WOULD YOU RATE THE INTERPRETATION OF THE LEGISLATION BY GOVERNMENT OFFICIALS?

The following Table 4.20 presents the findings for the fourth variable (V_4) measured under Objective 4. It also indicates the frequency distribution including the mean score and standard deviation, as a measure of dispersion.

Table 4.20: Rate Interpretation of Legislation

Rating	Frequency	Percent	Mean	Standard Deviation
Excellent (4)	3	8.1		
Good (3)	20	54.1		
Fair (2)	11	29.7	2.62	0.76
Poor (1)	3	8.1		
Total	37	100.0		

Majority of the respondents (83.78%) of the participants rated the interpretation of legislation as either good (54.05%) or fair (29.73%), which means the legislation is not complicated and, therefore, easy to understand.

4.8 SUMMARY OF THE RESULTS FROM THE SURVEY DESIGN

The following Table 4.21 presents the summary of the results from analyses of the findings for Objectives 1 to 4 for ease of comparing how the respondents have assessed the different variables for each objective.

Table 4.21: Summary of results for Objectives 1 to 4

Objective	Description	Variable	Mean	Standard Deviation
1	Investigate the value of the regulatory framework for consultation while implementing mega projects	Public consultation is an inherent part of implementation process	4.19	0.84
		Public consultation is the single most important factor in improving implementation	3.64	0.90
		Public consultation in the implementation of mega projects boosts implementation	4.38	0.79
		Effective implementation is a function of public consultation	4.08	0.76
2	Assess the coordination of SA legislation within the three spheres of government	Public consultation within the three tiers of government promotes public consultation in mega projects implementation	4.11	0.91
		Public consultation is at the centre of legislation in the three tiers of government	3.95	0.85
		Public consultation is given preference in legislation of national, provincial and local governments	3.97	0.97
		How would you rate the South Africa legislation within the three tiers of government (national, provincial and local) in promoting public consultation in implementing mega projects?	2.86	0.82
3	Investigate the monitoring	The current level of monitoring	3.43	0.90

Objective	Description	Variable	Mean	Standard Deviation
	regimen in SA legislation in implementation mega projects	guarantees public consultation in project implementation		
		Public participation would be boosted by the effective monitoring regimen	4.30	0.74
		The current monitoring regimen should be greatly improved	4.27	0.77
		How would you rate the monitoring regimen in SA legislation of mega projects?	2.54	0.93
4	Interrogate the interpretation of the legislation by government officials	The current level of monitoring guarantees public consultation in project implementation	3.22	1.20
		The interpretation of legislation by government officials incongruent with international benchmarks.	3.51	1.02
		The common and official interpretation of legislation by government officials is needed to boost effective implementation.	4.46	0.61
		How would you rate the interpretation of the legislation by government officials?	2.62	0.76

4.9 CASE STUDY OF MEGA PROJECTS IN SOUTH AFRICA

A case is a spatially delimited phenomenon (i.e., a unit) observed at a single point in time or over some period of time, while a case study is the intensive study of a single case for the purpose of understanding a larger class of cases (Gerring, 2006). The single case studied in this research was public protestation while three projects were used as the case study; analogous to the Type 2 case study, which adopts multiple units for a single case (Gerring, 2004; Rowley, 2002). Organizational and institutional documents of cases on public protestation were analysed during the document analysis phase of the case study method as supported by Bowen (2009). Being text-based documents, qualitative content analysis was adopted as supported by Kohlbacher (2006).

The four stages of qualitative content analysis including comprehending, synthesising, theorizing, and recontextualizing was adopted as supported by Houghton *et al*. (2015). The preceding summary was to provide the means for a qualitative analysis based on documented reports of protests on mega projects in South Africa to achieve the last objective (i.e., Objective 5), which was to investigate the cause of public protestations against the implementation of mega projects. This is now discussed subsequently.

4.9.1. POWER PROJECTS

Two of the largest projects, Medupi and Kusile, both in power stations, were being constructed in South Africa for local construction companies and the entire region to address shortage in electricity, which can have a big impact on the overall economy. According to Turok (2010), mega public sector projects in South Africa have failed because they serve a certain class of citizens. According to the Parliamentary Monitoring Group's report in 2011, while the number of connections per year was reportedly 100,000, the rural areas were left out such that about 2.5 million or 17% of South Africa's 13 million households were still without electricity as of 2011 when the project was already about four years underway. This aggravated the majority of the public who felt marginalized and not consulted. Medupi and Kusile coal-fired plants also involved a long list of local and international partners and contractors, and their impact on the economy would be significant. However, disgruntled workers embarked on a violent protest expressing their dissatisfaction around a group of foreign welders, riggers and pipe fitters. They claimed that there were sufficiently skilled workers of South African origin who had been ignored in favour of foreign workers. The knock-on effect as reported by the was that of new residents who vandalised Reconstruction and Development Programme (RDP) houses because they were not yet connected with

electricity. These different protests underscore the diversity of the public whose interests must be taken into consideration through an effective regulatory framework.

4.9.2. TRANSPORTATION PROJECTS

The Bus Rapid Transit system (BRT), that was introduced just before South Africa hosted the 2010 World Cup games, was meant to appeal to many people who would use the public transport system within the Gauteng province. However, Turok (2010) considered that the system went through initial challenges, which were effectively surmounted through public participation. Turok (2010) admitted that the system went through problems of changing perception about bus travel. Kruger and Luke (2015) underscored the issues in transport and supply chain in South Africa as including debates regarding, amongst others, the e-toll system, the torching of trains in protests against the current levels of service delivery, allegations that the passenger rail locomotives were not compliant with rail specifications, a decline in the number of employees in the transport, storage and communications sector, a decline in the number of passengers on commuter trains and buses in favour of minibus taxis and cars. Kruger and Luke's (2015) policy document review also stressed greater private-sector involvement, high-levels of infrastructure spending, and focussed skills development interventions. Again, these interlocking issues underscore the diversity of the public whose interests must be taken into consideration through proper regulatory framework.

4.9.3. ROAD E-TOLLING

This has been about the most contested public project in South Africa; hence, the need for a more in-depth review of this particular case. The e-tolling project consists of electronic toll

collection (ETC) processes utilised by the South African National Road Agency (SANRAL) in collection of tolls from specified toll roads and lanes in accordance with the SANRAL Act of 1998 (NRA 2015). Statistics indicate that 19% of roads in South Africa were toll roads in 2014 (NRA 2015). According to NRA (2015), many motorists find themselves subjected to the SANRAL tolls; hence, the resistance to the program. Many people in South Africa have been of the opinion that the system is illegal and have, therefore, denounced it.

For example, NRA (2015) has considered a coalition called the Opposition to Urban Tolling Alliance (OUTA), which initiated programs to frustrate the implementation of e-tolling, which a number of trade unions, churches and law firms supported. However, the high court ruled that the e-tolling project was lawfully constituted upon an approach by OUTA in 2012 (NRA 2015). NRA also suggested that there would be minimal or no opposition at all if the government had consulted the public through agencies such as OUTA before implementing the project.

According to NRA (2015), many people were lured into protesting against the e-tolling project because they did not understand what tolling was or why it was important. In addition, NRA admitted that these questions would have been answered favourably if consultation were done before implementation. Further, the road network in South Africa is divided into two parts, one funded and managed by SANRAL and toll roads managed by the private companies. SANRAL's road network is funded by funds collected from the capital markets through the issuance of bonds. In this regard, tolling is a similar method of payment based on the user-pay principle in which a motorists pays for the part of the road used. NRA ascertained that tolling is very important for SANRAL for a number of reasons. First, it becomes possible for SANRAL to provide roads sooner than the case would be if the agency were relying on tax funding to provide new roads. In addition, tolling enables SANRAL to

collect enough funds to maintain the roads in good conditions. If these aspects were communicated to the public before implementation of e-tolling, opposition to the project would be minimal (NRA 2015).

4.9.4. LEGAL FRAMEWORKS ON THE MEGA PROJECTS

Legal frameworks within South Africa are usually biased towards traditional public procurement laws, which usually hamper PPPs (Momsen, 2004). According to Matthew Nell & Assoc (Pty) Ltd (2007), mega projects in South Africa operate in a different legal environment, making it difficult for the existence of appropriate PPPs. The private sector always desires to participate fully in mega public sector projects. Considering that the government controls public initiatives, the private sector believes that more needs to be done by the government to ensure its full participation (Nell 2011).

4.9.5. CAUSES OF PUBLIC PROTESTATION ON PUBLIC MEGA PROJECTS IN SOUTH AFRICA

The preceding three cases of power projects and transportation projects, including the e-tolling as well as impact of the legal framework buttress the importance of public consultation as being the single most important factor in improving implementation (from the results of Objective 1), the need to improve on South Africa's legislation within the three tiers of government in promoting public consultation in implementing mega projects (from the results of Objective 2), which will also have a knock on effect on the monitoring regimen in SA legislation of mega projects (from the results of Objective 3), and, eventually, the interpretation of the legislation by government officials (from the results of Objective 4). These lowest ranked variables for the four objectives could be the causes of public protestation on mega projects in South Africa.

CHAPTER 5: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY

In summary, the implementation of mega public sector projects in South Africa is currently experiencing great resistance from the public. This study sought to investigate the reason why members of the public resist mega projects in South Africa. In essence, the study covered the legal framework in the country to examine how it addresses issues of public involvement in mega projects. The study utilises mixed method involving the use of questionnaires (Objectives 1 to 4) and content analysis of documents reviewed for the three cases studied (Objective 5).

5.2 FINDINGS

The first objective of this study was to investigate the value of the regulatory framework for consultation while implementing mega projects. The results from the survey revealed that public consultation in the implementation of mega projects do boost implementation (mean score = 4.38, standard deviation = 0.79). The lowest value lied in the view of public consultation as being the single most important factor in improving implementation (mean score = 3.64, standard deviation = 0.90). This could mean there are more factors that could and should be considered as can also be supported by the socio-economic theory of regulatory compliance (see Sutinen and Kuperan, 1999).

The second objective of this study was to assess the coordination of SA legislation within the three spheres of government. The results from the survey revealed that provisions within the three tiers of government promotes public consultation in mega projects implementation (mean score = 4.11, standard deviation = 0.91). Conversely, it revealed unsatisfactory

performance of South Africa's legislation within the three tiers of government in promoting public consultation in implementing mega projects (mean score = 2.86, standard deviation = 0.82). This could mean more needs to be done on coordination, despite the existing provision having the necessary mechanism. This can also be supported by Litwak and Meyer's (1966) theory of coordination between bureaucratic organizations and community primary groups.

The third objective of this study was to investigate the monitoring regime in SA legislation in implementation mega projects. The results from the survey revealed that public participation would be boosted by the effective monitoring regimen (mean score = 4.30, standard deviation = 0.74). The monitoring regime in SA legislation of mega projects appeared less than good (mean score = 2.54, standard deviation = 0.93).

The fourth objective of this study was to interrogate the interpretation of the legislation by government officials. The results from the survey revealed that common and official interpretation of legislation by government officials is needed to boost effective implementation (mean score = 4.46, standard deviation = 0.61). The interpretation of the legislation by government officials was less than good (mean score = 2.62, standard deviation = 0.76). The theory of interpretation substantiates "interpretation" as transcending naïve understanding and the "interpreter" having deep understanding of the whole (see Geanellos, 2000; Moore, 1985)

The last objective of this study was to investigate the cause of public protestations against the implementation of mega projects. It was inferred from the reports of the cases studied that the findings from the preceding objectives were indeed important considerations as they underlie protests on mega projects.

5.3 IMPLICATION

The practical implication of the preceding findings includes the need to review the existing regulatory framework to accommodate other factors in improving implementation. Secondly, there is also the need to improve coordination of SA legislation within the three spheres of government. Thirdly, the monitoring regimen needs to be re-evaluated and improved upon to boost implementation success of mega projects. Lastly, more education for implementation officers across the three spheres of government is also an important element. This will help solve the problem prevailing in the country. Government should also introduce monitoring and evaluation through the CIDB and provide guidelines on all the public consultation engagements.

Generally, most of the participants recommended that mega projects should be broadcast in all media, radio stations, flyers, billboards, political structures with all the benefits and how the project will make people's lives easier or better. This will attract more attention to the people and public participation will be the highest turn after a full complete awareness has been done. This will lead to people taking ownership of the project and the interest of the project will be secured by the community and this will limit vandalism and interruption of the project. Regular consultation meeting should be planned properly and be adhered to during pre-planning until implementation and project completion.

5.3 CONCLUSIONS

The SA legislation encourages public consultation within the three tiers of government and has clear guidelines of how it should be conducted, however the biggest challenge is on monitoring and enforcing the legislation. Mostly this challenge is only realised when the project is being challenged by local communities only to find that proper consultation has not

been carried out properly. Majority of the participants strongly agreed that the legislation dealing with public consultation in mega projects implementation and its interpretation within the three tiers of government is very clear but lacks monitoring and evaluation.

The monitoring of public consultation is very poor and, as a result, this lead to resistant in implementation of mega projects due to lack of monitoring and evaluation of the consultation process. The other issue which is very critical is the input of communities during public consultation stages only to find that what was agreed during consultation is not included during implementation which eventually leads to unrest and serious disruption.

In conclusion SA government has very good legislation in place, however, the only weakness is on the part of monitoring which is lagging behind completely and this could be the most important factor causing resistant and disruption of project. If proper monitoring of this consultative process is being monitored to ensure that community inputs are well captured and incorporated to the project, all mega projects will run smoothly with no cost overruns due disruption by communities .

The limitation of this research has been restricted to its sample size of 37 respondents and the need for more in-depth case studies based on the findings of this study for validation. A future study should look into these two areas. The motivation for the additional sample size is to increase the power and sample size estimations used by researchers to determine how many respondents are needed for improved validity in answering a research question. Jones *et al.* (2004) justified sample size estimation on the basis of its tendency to minimize the chances of type I and type II error. The in-depth case studies are to be able to generalize for the role of regulatory framework in public consultation in mega projects to address the increasing public protestation. Flyvbjerg(2006) investigated the five misunderstandings about case study to conclude that in-depth case studies hold valid for certain research questions in

so far the cases are studied in context. Consequently, a more in-depth study of one of the cases presented in this study will be a valuable future contribution to validate a plausible proposition. The proposition put forward in this study is there is the need to improve on the provisions and implementation of the existing regulatory framework among the spheres of government for better coordination and monitoring with the public.

6 REFERENCES

Abelson, J., Forest, P-G., Eyles, J., Smith, P., Martin, E. and Gauvin, F-P. (2003), "Deliberations about deliberative methods: issues in the design and evaluation of public participation processes", *Social Science & Medicine*, 57(2), pp.239-251.

Advisory Panel appointed by Gauteng Premier 2014, 'The socio-economic impact of the Gauteng Freeway Improvement Project and E-tolls Report', Advisory Report, Gauteng Provincial Government, Gauteng Provincial Government, Gauteng, SA.

Altshuler, A & David L 2003, Mega-Projects: The Changing Politics of Urban Public Investment. Washington, D.C.: Brookings Institution.

Altshuler, A & Luberoff, D 2003, *Mega-Projects: The Changing Politics of Urban Public Investment* Washington, DC: Brookings Institution.

Ambe, I.M. and Badenhorst-Weiss, J.A. (2012), "Procurement challenges in the South Africa public sector", *Journal of Transport and Supply Chain Management*, 6(1), pp.242-261.

Anderson, L.L., and Polkinghorn, B. (2008), "Managing conflict in construction megaprojects: Leadership and third-party principles", *Conflict Resolution Quarterly*, 26(2), pp.167-198

Arora, V. (2007), "Unheard Voices of Protest in Sikkim", *Economic & Political Weekly*, 42(34), pp. 3451-3454.

Baloyi, L. and Bekker, M. (2011), "Causes of cosntruction cost and time overruns: The 2010 FIFA World Cup stadia in South Africa", *Acta Structilia*, 18(1), pp.51-67.

Beaumont, T 2011, *South Africa after Siege*, T & T Publications, London, UK.

Berg, BL & Lune, H 2014, *Qualitative Research Methods for the Social Sciences*, 8th edn, Pearson Education, Limited, New York, NY.

Blas, E, Sommerfeld, J & Kurup, S 2011, *Social Determinants Approaches to Public Health: From Concept to Practice*, World Health Organization, Geneva, Switszerland.

Blaser, M, Feit, HA & McRae, G 2004, *In the Way of Development: Indigenous Peoples, Life Projects and Globalisation*, IDRC, Nairobi, KE.

Bond, P. (1999), "Basic infrastructure for socio-economic development, environmental protection and geographical desegregation: South Africa's unmet challenge", *Geoforum*, 30(1), pp.43-59.

Bornstein, L. (2010), "Mega-projects, city-building and community benefits", *City, Culture and Society*, 1(4), pp.199-206.

Botha, M 2013, 'Sustainable Housing Development:A City of Cape Town Project Evaluation', Stellenbosch University, Eikestad, SA.

Bowen, G.A. (2009), "Document Analysis as a Qualitative Research Method", *Qualitative Research Journal*, 9(2), pp.27-40.

Bulkeley, H & Mol, AP 2003, 'Participation and Environmental Governance: Consensus, Ambivalence and Debate', *Environmental Values* vol XI, no. 2: pp. 143–54.

Cameron, R 2015, *The Rise of the Mega City Project in South Africa*, viewed 2 December 2015, < HYPERLINK "http://mcaplan.co.za/the-rise-of-the-mega-city-project-in-south-africa/" http://mcaplan.co.za/the-rise-of-the-mega-city-project-in-south-africa/ >.

Catt, H. and Murphy, M. (2003), "What voice for the people? categorising methods of public consultation", *Australian Journal of Political Science*, 38(3), pp.407-421.

Cornelissen, S. (2008), "Scripting the nation: sport, mega-events, foreign policy and state-building in post-apartheid South Africa 1", *Sport in Society*, 11(4), pp.481-493.

Creswell, J.W. (2003), *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 2nd edition. Sage Publications, London.

Culver, K. and Howe, P. (2004), "Calling all citizens: The challenges of public consultation", *Canadian Public Administration*, 47(1), pp.52-75.

Dang, T.H.G. and Low, S.P. (2013), "Role of construction in economic development: review of key concepts in the past 40 years", *Habitat International*, 35, pp.118-125.

Davies, A. 2001 'What Silence Knows – Planning, Public Participation And Environmental Values', *Environmental Values*, vol X, no. 1, pp. 77–102.

Diduck, A.P., Pratap, D., Sinclair, A.J. and Deane, S. (2013), "Perceptions of imapcts, public participation, and learning in the planning, assessment and mitigation of two hydroelectric projects in Uttarakhand, India", *Land Use Policy*, 33, pp.170-182.

Du Plessis, A 2008, 'Public Participation, Good Environmental Governance and Fulfilment of Environmental Rights', *Potchefstroom Electronic Law Journal*, vol XI, no. 2: pp. 170-201.

Fainstein, S.S. (2008), "Mega-projects in New York, London and Amsterdam", *International Journal of Urban and Regional Research*, 32(4), pp.768-785.

Fedderke, J.W., Perkins, P. and Luiz, J.M. (2006), "Infrastructure investment in long-run economic growth: South Africa 1875-2001", *World Development*, 34(6), pp.1037-1059.

Fiori, C. and Kovaka, M. (2005), "Defining Megaprojects: Learning from Construction at the Edge of Experience", *Construction Research Congress: Broadening Perspectives*, pp.1-10.

Fischer, F 2000, *Citizens, Experts and the Environment*, Durham, NC: Duke University Press, p.222.

Flyvbjerg, B. (2014), "What You Should Know About Megaprojects and Why: An Overview", *Project Management Journal*, 45(2), pp.6-19.

Flyvbjerg, B, Bruzelius, N & Rothengatter, W 2006, *Mega Projects and Risk : An Anatomy of Ambition*, Cambridge Univiversity Press, Cambridge, UK.

Gaetsewe, R, Monyane, T & Emuze, F 2015, *Overruns Again in Public Projects: Perspective from Northern Cape,South Africa*, online

Geanellos, R. (2000), "Exploring Ricoeur's hermeneutic theory of interpretation as a method of analyzing texts", *Nursing Inquiry*, 7(2), pp.112-119.

Gerring, J. (2004), "What is a case study and what is it good for?", *The American Political Science Review*, 98(2), pp.341-354.

Gerring, J. (2006), *Case study research: Principles and practices*, Cambridge University Press, New York.

Giddens, A, Duneier, M, Appelbaum, RP & Carr, DS 2013, *Introduction to Sociology*, 9th edn, W. W. Norton, Incorporated, New York, NY.

Gillham, O & MacLean, A (2002), *The Limitless City: A Primer on the Urban Sprawl Debate*. Hoboken, NJ: Island Press.

Golafshani, N. (2003), "Understanding Reliability and Validity in Qualitative Research", *The Qualitative Report*, 8(4), pp.597-606.

Haferburg, C & Huchzermeyer, M 2015, *Urban Governance in Post-apartheid Cities: Modes of Engagement in South Africa's Metropoles*, University of KwaZulu-Natal Press, Pietermaritzburg, SA.

Handcock, M.S., Gile, K.J. and Mar, C.M. (2014), "Estimating hidden population size using Respondent-Driven Sampling data", *Electronic Journal of Statistics*, 8(1), pp.1491-1521.

Heckathorn, D.D. (1997), "Responent-driven sampling: a new approach to the study of hidden populations", *Social Problems*, 44(2), pp.174-199.

Holmes, B 2011, *Citizens' Engagement in Policymaking and the Design of Public Services*, online

Homes & Communities Agency (2015), *What is the regulatory framework?* Homes and Communities Agency, Fry Building, London. Available from: www.gov.uk/government/publications/what-is-the-regulatory-framework (accessed 5 March 2017)

Houghton, C., Murphy, K., Shaw, D., and Casey, D. (2015), "Qualitative case study data analysis: an example from practice", *Nurse Researcher*, 22(5), pp.8-12.

Hu, Y., Chan, A.P.C., Le, Y. and Jin, R-Z (2013), "From Construction Megaproject Management to Complex Project Management: Bibliographic Analysis", *Journal of Management in Engineering*, 31(4), p.04014052.

Johannes, N. and Peters, D. (2012), “Railway station mega-projects as public controversies: The case of Stuttgart 21”, *Built Environment*, 38(1), pp.128-145.

Jones, S., Carley, S. and Harrison, M. (2003), “An introduction to power and sample size estimation”, *Emergency Medicine Journal: EMJ*, 20(5), p.453.

Julie, C. 2001 "Relocation for Giant Dam Inflames Chinese Peasants". *National Geographic*. *Retrieved 2008-01-20*.

Kelsey, S (ed.) 2011, *Computer-Mediated Communication: Issues and Approaches in Education: Issues and Approaches in Education*, IGI Global, Hershey, PA.

Kennedy, L, Robbins, G, Bon, B & Takano, G 2014, *Megaprojects and Urban Development in Cities of the South*, online

Kerzner, HR 2009, *Project Management: A Systems Approach to Planning, Scheduling, and Controlling*, 10th edn, John Wiley & Sons, Boston, MA.

Kirchherr, J., Charles, K.J. and Walton, M.J. (2016), “Multi-causal pathways of public opposition to dam projects in Asia: A fuzzy set qualitative comparative analysis (fsQCA)”, *Global Environmental Change*, 41, pp.33-45.

Klakegg, O.J., Williams, T., Magnussen, O.M. and Glasspool, H. (2008), “Governance Frameworks for Public Project Development and Estimation”, *Project Management Journal*, 39(S1), pp.S27-S42.

Kohlbacher, F. (2006), “The Use of Qualitative Content Analysis in Case Study Research”, *Forum: Qualitative Social Research*, 7(1), pp.1-30.

Kruger, S. and Luke, R. (2015), “Current issues in the transport and supply-chain environment in South Africa”, *Journal of Transport and Supply Chain Managemen*t, 9(1), Art. #220, pp.1-3.

Lee, N. and George, C. (2000), “Methods of Consultation and Public Participation”, In: Bisset, R. (Ed.), *Environmental Assessment in Developing and Transnational Countries*, pp.149-160.

Lehrer, U. & Laidley, J. 2008, ‘Old Mega-projects Newly Packaged? Waterfront Redevelopment in Toronto’. *International Journal for Urban and Regional Research* vol XXXII, no. 4: pp. 786–803.

Li, H. and Guo, H.L. (2011), “Complexities in managing mega construction projects”, *International Journal of Project Management*, 29(7), pp.795-796.

Li, T.H.Y., Ng, S.T. and Skitmore, M. (2012), “Conflict or consensus: An investigation of stakeholder concerns during the participation process of major infrastructure and construction projects in Hong Kong”, *Habitat International*, 36(2), pp.333-342

Li, T.H.Y., Ng, S.T. and Skitmore, M. (2013), "Evaluating stakeholder satisfaction during public participation in major infrastructure and construction projects: A fuzzy approach", *Automation in Construction*, 29, pp.123-135
Litwak, E. and Meyer, H.J. (1966), "A balance theory of coordination between bureaucratic organizations and community primary groups", *Administrative Science Quarterly*, pp.31-58.

Lizzaride, G. (2011), "Stakeholder participation and incremental housing in subsidized housing projects in Colombia and South Africa", *Habitat International*, 35(2), pp.175-187.

Mackenzie, N. and Knipe, S. (2006), "Research dilemmas: Paradigms, methods and methodology", *Issues in Educational Research*, 16

Maennig, W. and Du Plessis, S. (2007), "World Cup 2010: South African economic perspectives and policy challenges informed by the experience of Germany 2006", *Contemporary Economic Policy*, 25(4), pp.578-590

Malins, J & Gray, C 2013, *Visualising Research: A Guide to the Research Process in Art and Design*, Ashgate Publishing, Ltd., Burlington, Vermont.

Malyshev, N. (2010), Regulatory Frameworks in OECD countries and their Relevance for India, *A presentation by the Senior Counsellor, Public Governance and Territorial Development, OECD. April 2.* Available at: www.oecd.org/gov/regulatory-policy/44933928.pdf (accessed 5 March 2017).

Matheson, V.A. and Baade, R.A. (2004), "Mega-sporting events in developing nations: Playing the way to prosperity?", *South African Journal of Economics*, 72(5), pp.1085-1096.

Matthew Nell & Assoc (Pty) Ltd 2007, 'Key Challenges to Public Private Partnerships in South Africa:Summary of Interview Findings', Support Program for Accelerated Infrastructure Development.

Mok, K.Y., Shen, G.Q. and Yang, J. (2015), "Stakeholder management studies in mega construction projects: A review and future directions", *International Journal of Project Management*, 33(2), pp.446-457.

Momsen, JH 2004, *Gender and Development*, Psychology Press, New York, NY.

Moore, M.S. (1985), "A natural law theory of interpretation", *Southern California Law Review*, 58, p.277.

Müller, R 2009, *Project Governance*, 2nd edn, Gower Publishing, Ltd., Aldershot, GU.

Nattrass, N., and Seekings, J. (2001), "Democracy and distribution in highly unequal economies: the case of South Africa.", *The Journal of Modern African Studies*, 39(3), pp.471-498.

Nazrul, I, Nazrul, I, Martinez & Wang, X 2002, *Environmental Law in Developing Countries: Selected Issues*, *IUCN*, pp.7

Nell, M 2011, *Key Challenges to Public Private Partnerships in South Africa:Summary of Interview Findings*, online

NRA 2015, *A User's Guide to Tolling Content*, online

O'Faircheallaigh, C. (2010), "Public participation and environmental impact assessment: Purposes, implications, ad lessons for public policy", *Environmental Impact Assessment Review*, 30(1), pp.19-27.

Onwuegbuzie, A.J. and Leech, N.L. (2005), "Taking the "Q" Out of Research: Teaching Research Methodology Courses Without the Divide Between Quantitative and Qualitative Paradigms", *Quality & Quantity*, 39, pp.267-296

Owens, S 2000, 'Engaging the Public: Information And Deliberation In Environmental Policy', *Environment and Planning A*, vol XXXII, no. 2, pp. 1141–8.

Parnell, S & Oldfield, S 2004, *The Routledge Handbook on Cities of the Global South*, Routledge, New York, NY.

Parrock, P 2015, *Mega Project Analysis: A Case Study of the Gauteng Freeway Improvement Project*, online

Perkins, P., Fedderke, J. and Luiz, J. (2005), "An analysis of economic infrastructure investment in South Africa", *South African Journal of Economics*, 73(2), pp.211-228.

Perry, J.L. and Kraemer, K.L. (1986), "Research Methodology in the Public Administration Review, 1975-1984", *Public Administration Review*, 215-226

Pellizzoni, L 2003, 'Uncertainty and Participatory Democracy', *Environmental Values* vol, XII, no. 2: pp195-224.

Pillay, U, Tomlinson, R & Bass, O 2009, *Development and Dreams : The Urban Legacy of the 2010 Football World Cup*, HSRC Press, Cape Town, SA.

Priemus, H, Flyvbjerg, B & Wee, BV 2008, *Decision-making on Mmega-Projects: Cost-Benefit Analysis, Planning and Innovation*, Edward Elgar, Cheltenham, UK.

Ramoshaba, RW 2012, *Portfolio of Back Business in South Africa*, Leadership Publications, Johannesburg, SA.

Rowe, G and Gammack, J.G 2004, Promise and Perils of Electronic Public Engagement, *Science and Public Policy*, vol XXX, no.1, pp. 39-54.

Rowe, G. and Frewer, L.J. (2000), "Public Participation Methods: A Framework For Evaluation", *Science, Technology, & Human Values*, 25(1), pp. 3-29.

Rowe, G. and Frewer, L.J. 2005, A Typology of Public Engagement Mechanisms, Science, *Technology, & Human Values*, vol XXX, no. 2, pp. 251-290.

Rowley, J. (2002), “Using case studies in research”, *Management Research News*, 25(1), pp.16-27.

Salganik, M.J. and Heckathorn, D.D. (2004), “Sampling and Estimation in Hidden Populations Using Respondent-Driven Sampling”, *Sociological Methodology*, 34, pp.193-239.

Sals n.d, *Public Participation Framework for the South African Legislative Sector*, online

Saunders, M., Lewis, P. and Thornhill, A. (2007), *Research Methods for Business Students*, 4th edition, Pearson Education, England.

Schonlau, M. and Liebau, E. (2012), “Respondent-driven sampling”, *The Stata Journal*, 12(1), pp.72-93

Söderlund, J. and Geraldi, J. (2012), “Classics in project management: revisiting the past, creating the future”, *International Journal of Managing Projects in Business*, 5(4), pp.559-577.

Söderlund, J. and Sylvain, L. (2013), “Making Project History: Revisiting the Past, Creating the Future”, *International Journal of Project Management*, 31(5), pp.653-662.

South Africa Info 2015, *Gauteng plans Mega Projects to house people*, online

Sutinen, J.G. and Kuperan, K. (1999), “A socio-economic theory of regulatory compliance”, *International Journal of Social Economics*, 26(1/2/3), pp.174-193.

Tan, W. (2011), *Practical Research Methods*, 4th edition, Pearson Education South Asia Pte Ltd, Singapore.

Taşan-Kok, T 2010, *Contradictions of Neoliberal Planning: Cities, Policies and Politics*, Springer, New York, NY.

Teddlie, C. and Yu, F. (2007), “Mixed Methods Sampling: A Typology With Examples”, *Journal of Mixed Methods Research*, 1(1), pp.77-100.

Tomlinson, R, Beauregard, R, Bremmer, L & Mangcu, X 2014, *Emerging Johannesburg*, 2nd edn, Routledge, London, UK.

Turok, I 2015, 'South Africa's new urban agenda: Transformation or compensation?', *Local Economy November*, vol III, no. 2, pp. 1-5.

Ugwu, O.O. and Haupt, T.C. (2007), “Key performance indicators and assessment methods for infrastructure sustainability – a South African construction industry perspective”, Building and Environment, 42(2), pp.pp.665-680.

University of Natal 2015, *The South African journal of environmental law and policy*, School of Law, University of Natal, Scottsville, South Africa.

Van Der Westhuizen, J. (2007), “Glitz, Glamour and the Gautrain: Mega-Projects as Political Symbols”, *South African Journal of Political Studies*, 34(3), PP.333-351.

Van Der Westhuizen, J. and Swart, K. (2011), “Bread or circuses? The 2010 World Cup and South Africa’s quest for marketing power”, *The International Journal of the History of Sport*, 28(1), pp.168-180.

Yung, E.H.K. and Chan, E.H.W. (2011), “Problem issues of public participation in built-heritage conservation: Two controversial cases in Hong Kong”, *Habitat International*, 35(3), pp.457-466.

Zhai, L., Xin, Y. and Cheng, C. (2011), “Understanding the value of project management from a stakeholder’s perspective: Case study of mega-project management”, *Project Management Journal*, 40(1), pp.99-109.

ANNEX 1: ETHICS CLEARANCE CERTIFICATE

School of Construction Economics & Management

University of the Witwatersrand, Johannesburg -PO Box 20, Wits 2050, South Africa - Tel: +27 (0)11 717 7652/77669 - Fax: +27 (0)11 717 9729 Email:CEM@wits.ac.za

SCHOOL OF CONSTRUCTION ECONOMICS AND MANAGEMENT RESEARCH ETHICS COMMITTEE

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER CEM/16/07/MLM/MSC**
PROJECT TITLE	The importance of public consultation in implementing mega public sector projects
INVESTIGATOR	
M L Mahayi	
SCHOOL/DEPARTMENT	**SCHOOL OF CONSTRUCTION ECONOMICS AND MANAGEMENT**
DATE CONSIDERED	11/7/2016
DECISION OF THE COMMITTEE	Approved conditionally with respect to the declaration
EXPIRY DATE	10th July 2017
DATE 11 July 2016	**CHAIRPERSON** Dr. Kola Ijasan

cc: Supervisor :

DECLARATION OF INVESTIGATOR (S)

To be completed in duplicate and **ONE COPY** returned to the Secretary Mrs. M. Sithole at the CEM reception desk.

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. I agree to completion of a yearly progress report.

Signature Date ____/____/____

ANNEX 2: QUESTIONNAIRE

TOPIC: THE IMPORTANCE OF PUBLIC CONSULTATION IN IMPLEMENTATION OF MEGA PROJECTS

SECTION 1: Please answer questions by putting a tick [√] in the appropriate box or by writing in the space provided.

General Information

1. Gender

(a) Male [ ]

(b) Female [ ]

2. Age in years

18-29 [ ]

30- 49 [ ]

50 and above [ ]

3. What is your highest Level of education?

(a) Secondary [ ]

(b) College [ ]

(c) University [ ]

(d) Others [ ]

SECTION 2: Please tick (√) the appropriate scale with 1 strongly disagree, 2 disagree, 3 neutral, 4 agree and 5 strongly agree.

South Africa regulatory framework in inculcating public consultation for mega projects implementation

Statement of Facts	**Strongly agree[5]**	**Agree [4]**	**Neutral [3]**	**Disagree [2]**	**Strongly disagree[1]**
Public consultation is an inherent part of implementation process					
Public consultation the single-most factor in improving implementation					
Public consultation in the implementation of mega projects boosts implementation					
Effective implementation is a function of public consultation					

Does the South Africa regulatory framework in inculcating public consultation for mega projects implementation influence the success of the projects?

Yes [ ]

No [ ]

Explain

SECTION 3: Please tick (√) the appropriate scale with 1 strongly disagree, 2 disagree, 3 neutral, 4 agree and 5 strongly agree.

Does the South Africa legislation within the three tiers of government (national, provincial and local government) promotes public consultation in implementing mega projects

Statement of Facts	**Strongly agree[5]**	**Agree [4]**	**Neutral [3]**	**Disagree [2]**	**Strongly disagree[1]**
The national, provincial and local governments support public consultation					
Public consultation is at the center of legislation in the three tiers of government					
Public consultation is given preference in the legislations of national, provincial and local governments					

How would you rate the South Africa legislation within the three tiers of government (national, provincial and local government) in promoting public consultation in implementing mega projects?

a) Excellent
b) Good
c) Fair
d) Poor

SECTION 4: Please tick (√) the appropriate scale with 1 strongly disagree, 2 disagree, 3 neutral, 4 agree and 5 strongly agree.

The monitoring regimen in South Africa legislation in implementation mega projects

Statement of Facts	**Strongly agree[5]**	**Agree [4]**	**Neutral [3]**	**Disagree [2]**	**Strongly disagree[1]**
The current level of monitoring guarantees public consultation in project implementation					
Public participation would be boosted by the effective monitoring regimen					
The current monitoring regimen should be greatly improved					

How would you rate the monitoring regimen in SA legislation in implementation mega projects?

a) Excellent
b) Good
c) Fair
d) Poor

SECTION 5: Please tick (√) the appropriate scale with 1 strongly disagree, 2 disagree, 3 neutral, 4 agree and 5 strongly agree.

The interpretation of the legislation by government officials

Statement of Facts	**Strongly agree[5]**	**Agree [4]**	**Neutral [3]**	**Disagree [2]**	**Strongly disagree[1]**
The interpretation of legislation by government officials advances public consultation					
The interpretation of legislation by government officials incongruent with international benchmarks.					
A common and official interpretation of legislation by government officials is needed to boost effective implementation					

How would you rate the interpretation of the legislation by government officials?

a) Excellent
b) Good
c) Fair
d) Poor

SECTION 6: Suggestion/Recommendation

Generally, how would you describe the South Africa regulatory framework in inculcating public consultation for mega projects implementation?

……

……

……

Would you suggest ways of improving South Africa regulatory framework in inculcating public consultation for mega projects implementation?

……

……

……