

**“The Applicability of Public Private Partnerships as Alternative
Funding Models within the Gauteng Department of Roads and
Transport”**

A Research Report

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Requirements for the

MASTERS DEGREE IN BUSINESS ADMINISTRATION,

UNIVERSITY OF SOUTH AFRICA

By

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May 2012

I

DECLARATION

I, Ernest Tawanda Chigurah, declare that this thesis is my own, unaided work. It is being submitted in partial fulfilment of the requirements for the Master's Degree in Business Administration (MBA) to the University of South Africa, Pretoria. It has not been submitted before for any degree or examination in any other academic institution.

May 2012

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I would like to express sincere gratitude to the Lord Almighty for giving me the strength to shoulder on with my studies since the first day I entered a classroom until this point where I am taking on the last lap towards attaining my MBA qualification. He has been faithful to me and I know He will continue to do mighty things in my life according to His promises.

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To my very special tutor, Ms Rosemary Sibanda, I would like to say, you were my eyes when I was blind because you made me see things in a different way always. Your advice, constructive criticism and your support helped me refine this work to the level it has gotten to. You are an inspiration and I know that the lessons I learned from you will take me to greater heights.

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EXECUTIVE SUMMARY

Considering the condition of the Gauteng provincial road network, it has become critical that all the road maintenance and construction programmes be enhanced. However, the need to have an efficient and effective provincial road network has put a strain on the allocations given to the Gauteng Department of Roads and Transport (GDRT) annually.

Over the years, there had been sole reliance by GDRT on MTEF funds which, according to the findings of this research, have been reducing every successive year. Based on these factors, it has become imperative for GDRT to explore alternative funding sources to sustain their road maintenance and construction programmes. The possible source of these alternative funds which GDRT could explore is the private sector under the Public Private Partnership (PPP) engagements.

This research sought to establish whether the PPP models could be applied effectively within GDRT. A questionnaire survey was applied on GDRT employees directly involved with construction and maintenance projects. After obtaining the data, a qualitative analysis was done on the perceptions of the survey participants on the various questions contained in the questionnaire. The findings revealed that before adopting any alternative funding model, there must be a strong justification for the idea. This will ensure support from other stakeholders involved especially politicians and members of the provincial leadership. Once approval has been given to explore these alternative funding sources, it then becomes the responsibility of the government entity to unravel the elements which determine the adoptability of the alternative funding models.

Since this research focused on PPPs, it established that most people perceive that the government entity's political environment, the skills development and sourcing programmes, the organisational structure, the

existing monitoring and evaluation mechanisms, the future financial commitments and priorities, the alignment of policies and legislation with strategies and the resident culture within the organization are the elements which need to be focused on before committing to any PPP engagement.

The results from this research suggest that it may not be possible for GDRT to adopt PPP models because the state of the elements mentioned above do not all support the strategy. This therefore means that effort has to be put to establish an environment within GDRT which makes PPPs applicable before they can be adopted, lest it will be a complete failure which may create unnecessary liabilities for the government.

GLOSSARY OF ACRONYMS

MTEF:	Medium Term Expenditure Framework
GDRT:	Gauteng Department of Roads and Transport
SANRAL:	South African National Roads Agency Limited
SPV:	Special Purpose Vehicle
PPP:	Public Private Partnership
E-Tolling:	Electronic Tolling
HOD:	Head of Department
MEC:	Member of the Executive Council
OTUTA:	Opposition to Urban Tolling Alliance
COSATU:	Congress of South African Trade Unions

Table of Contents

DECLARATION	II
ACKNOWLEDGEMENTS	III
EXECUTIVE SUMMARY	IV
GLOSSARY OF ACRONYMS	VI
1 Chapter 1: Introduction and Problem in Context/ Background to the Problem.....	1
1.1 Introduction.....	1
1.2 Problem in Context	3
1.2.1 Provincial road network condition	4
1.2.2 Provincial road network age distribution	5
1.2.3 Road user cost	6
1.2.4 Road network asset value	7
1.3 Problem Review	8
1.4 Problem Statement / Research Statement	12
1.5 Research Objectives	14
1.6 Limitations	14
1.7 Delimitations	15
1.8 Importance of the Study	15
1.9 Research Assumptions	16
1.10 Outline of Report	16
2 Chapter 2: Problem Analysis / Theoretical Considerations.....	19
2.1 Introduction.....	19
2.2 Public Private Partnerships	19
2.2.1 Supply and management	23

2.2.2	Turnkey.....	24
2.2.3	Affermage/ Leases.....	26
2.2.4	Concession.....	28
2.2.5	Private ownership.....	30
2.3	Organizational Structure.....	33
2.4	The External Environmental Elements.....	34
2.4.1	The macro environment.....	37
2.4.2	The industry environment.....	41
2.4.3	Micro environment.....	42
2.5	Alignment of Organizational Culture, Policies and Organisational Structure with Organizational Strategies and Priorities.....	45
2.6	Resistance to Change.....	49
2.6.1	Six-step model of change.....	50
2.7	Conclusion.....	52
3	Chapter 3: Literature Review.....	54
3.1	Introduction.....	54
3.2	PPPs.....	56
3.3	Alignment.....	57
3.4	Politics.....	61
3.5	Skills.....	62
3.6	Project Appraisal and Prioritization.....	64
3.7	Social Impacts.....	65
3.8	Culture.....	66
3.9	Structure.....	66
3.10	Funding.....	68
3.11	External Environment.....	70

3.12	Change.....	70
3.13	Conclusion	71
4	Chapter 4: Research Design/Research Methodology.....	72
4.1	Introduction.....	72
4.2	Research Designs	72
4.3	Research Approaches.....	76
4.3.1	Qualitative approach	76
4.3.2	Quantitative approach	78
4.4	Survey Based Research.....	80
4.5	Research Tools.....	80
4.5.1	Questionnaires	81
4.5.2	Secondary data analysis	83
4.6	Research Data Validity	83
4.6.1	Internal validity	83
4.6.2	External validity	84
4.7	Sampling.....	85
4.8	Data Analysis.....	88
4.9	Research Ethics.....	89
4.10	Conclusion	91
5	Chapter 5: Results and Discussion	92
5.1	Introduction.....	92
5.2	Demographics.....	93
5.3	Results per Objective, Responses to Individual Questions, Summaries per Objective, Discussions and Integration	95
5.3.1	Results for objective 1.....	95
5.3.2	Results for objective 2.....	99

5.3.3	Results for objective 3.....	104
5.3.4	Results for objective 4.....	113
5.4	Conclusion.....	118
6	Chapter 6: Conclusion and Recommendations.....	119
6.1	Introduction.....	119
6.2	Conclusions	119
6.2.1	Contribution to knowledge	122
6.3	Recommendations	123
6.3.1	Recommendations for further/future studies	125
7	REFERENCES	126
8	APPENDICES	132
8.1	QUESTIONNAIRE.....	132

1 Chapter 1: Introduction and Problem in Context/ Background to the Problem

1.1 Introduction

The Gauteng Department of Roads and Transport (GDRT) is a local government department responsible for ensuring the provision of transport infrastructure and transport systems as part of an integrated social and economic development that is designed to create a better life for all. This includes creating the necessary policies and legislative environment of transport provisions as well as the actual infrastructure development, freight logistics and the provision of public transport.

GDRT is driven by the objectives of providing a world class public transport, roads infrastructure network and systems that facilitate seamless mobility of people within Gauteng. It strives to achieve this through the provision of environmentally sustainable public transport and road infrastructure, integrated transport systems and services that are reliable, accessible, safe and affordable to allow the people of Gauteng province to actively participate in economic and social spheres.

(South Africa. Gauteng Department of Roads and Transport, 2012: p6)

However, over the years, roads construction and maintenance budgetary allocations to the Gauteng Department of Roads and Transport have been dwindling resulting in most of the provincial roads deteriorating at a faster rate than normal. This poor condition of the roads has necessitated some innovative thinking to try and resurrect the provincial road network. One alternative is the adoption

of the “Public Private Partnerships (PPP)” to augment the traditional government MTEF funding model which is currently too tired to sustain the funding demands.

Through this study the readiness of the GDRT to implement the PPP models will be investigated. The study will unpack the problems facing GDRT in terms of the service delivery backlog and justify why there is a real need to explore alternative funding models. To establish GDRT’s readiness to adopt the PPP funding model, surveys will be used to establish perceptions about the existing conditions within GDRT and how they may affect the adoption of an alternative funding model. Existing policies, MTEF budget information, available skills, the organizational culture, the employees willingness to change and the level of political influence will be considered in coming up with a concrete conclusion on the thesis.

1.2 Problem in Context

The backlog of roads service delivery in Gauteng has put the Department of Roads and Transport and the government of South Africa under immense pressure and criticism from the public especially those who use the road network on a daily basis. It has resulted in social unrests, high road user costs, injuries and even deaths and has compromised the province's ambition of being a globally competitive province.

Over the years, roads in Gauteng Province have been deteriorating at a very fast rate mainly due to the fact that most of them have passed their design lives, which are normally 15 to 25 years, and because the funding trends can no longer cope with the road maintenance and upgrading demands.

(South Africa. Gauteng Department of Roads and Transport, 2011:p1).

The 2010 Road Network Management System (RNMS) report focused on a total of 4 086km of paved roads and it revealed that the greater portion of the network is in an appalling state and if nothing is done in time, the situation can get worse

(South Africa. Gauteng Department of Roads and Transport, 2011:p7).

1.2.1 Provincial road network condition

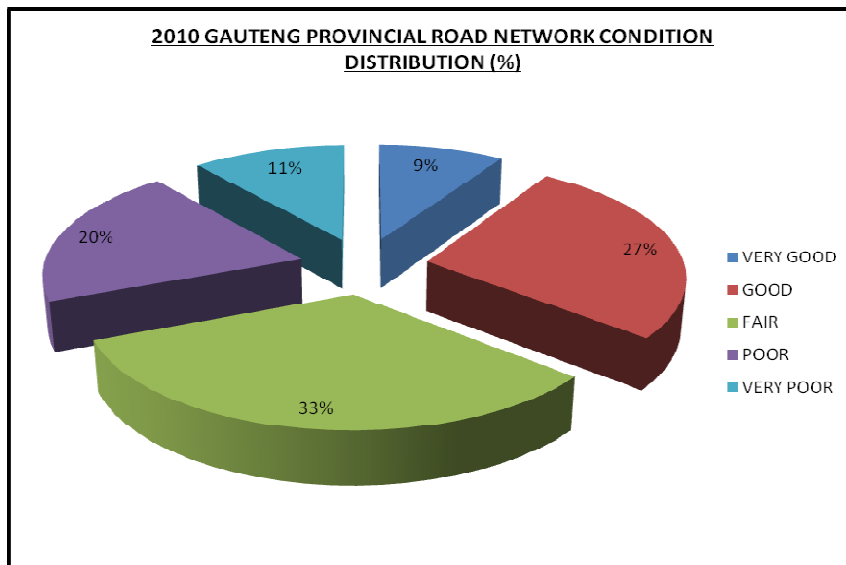


Fig 1.0: VCI Distribution of the Network (% Length and km) for 2010 (South Africa. Gauteng Department of Roads and Transport, 2011:p7).

From the 2010 survey, the average provincial network condition is 61%, which is more or less in the middle of the "Fair" condition category. However, it is neither sustainable nor advisable to operate a road network at this average condition level hence the need for immediate action. Figure 1.0 shows that 31% of the network is currently in "Poor and Very Poor" condition. This suggests that there is a huge backlog of rehabilitation needs, which is just increasing from year to year. The percentage of roads in "Poor and Very Poor" condition was 15% in 2009 which reflects that the network is deteriorating further. The 33% portion of the network which is in "Fair" condition tends to switch to the "Poor or Very Poor" condition within a short period of time because maintenance and rehabilitation actions are failing to prohibit this from happening. Typically the portion of the network which is in a "Good to Very

good” condition must be more in order to avoid the backlogs which currently exist.

(South Africa. Gauteng Department of Roads and Transport, 2011:p7).

1.2.2 Provincial road network age distribution

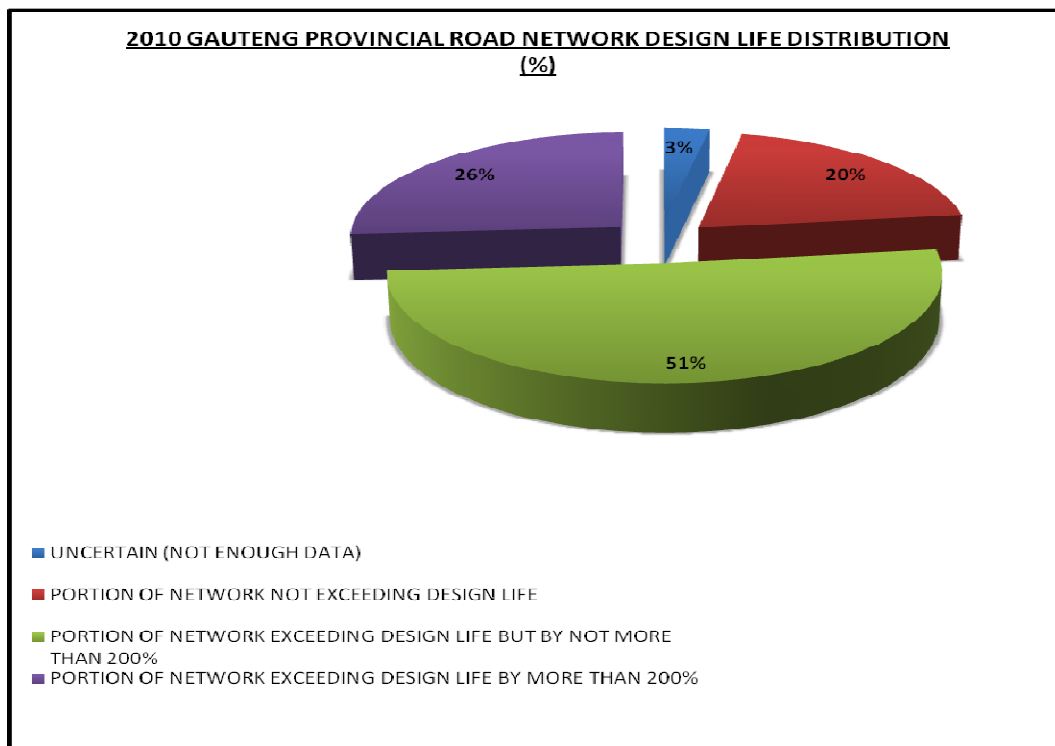


Fig 2.0: Design Life Distribution (Percentage) (2010) (South Africa. Gauteng Department of Roads and Transport, 2011:p11).

The distribution of road network ages provides a first order estimation of the current and future pavement replacement demand that can be expected. Pavements have a limited life span varying from 15 years to 30 years and depend heavily on the maintenance

they receive over their lives for their survival. Heavy rehabilitation or reconstruction is inevitable to ensure the continued functioning of the network once it has exceeded its design life. Figure 2.0 shows that 71% of the network had exceeded its design life by 2010, meaning that funds were already required to extend the lives of the already aged roads. It is unfortunate that once a greater part of the network has reached its design life, maintenance costs rise especially due to the frequency of maintenance activities required. (South Africa. Gauteng Department of Roads and Transport, 2011:p11).

1.2.3 Road user cost

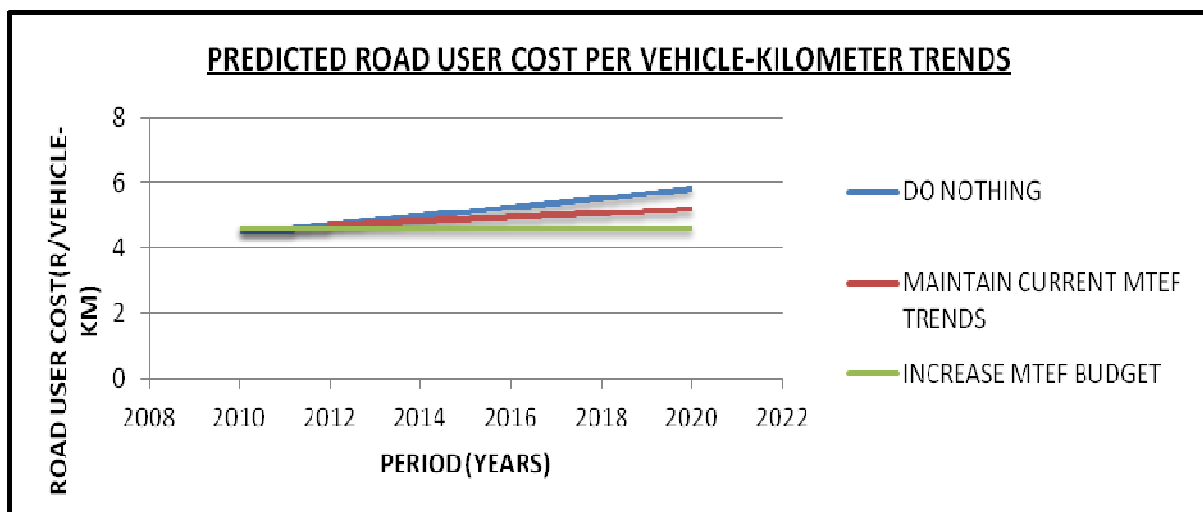


Fig 3.0: Predicted Road User Costs (South Africa. Gauteng Department of Roads and Transport, 2011:p19).

In pavement management, the impact of riding quality on road users is measured in terms of road user cost. Road user cost is expressed as Vehicle Operating Cost (VOC) comprising of: tyre, vehicle, fuel and oil cost. As the pavement condition worsens, road

user cost tends to increase dramatically. The total estimated road user cost was approximately R 84 billion for the estimated 24 billion vehicle-kilometres travelled on provincial paved roads in Gauteng during 2010. The challenge the GDRT is having is that it bears some of the road user costs in form of claims for damages and accidents. High road user costs also negatively impact the prospects of development within Gauteng because investors would not want to spend much on movement and also need efficient and effective accesses when conducting business.

(South Africa. Gauteng Department of Roads and Transport, 2011:p19).

1.2.4 Road network asset value

The asset value is a measure of the worth of the road network, and is made up of the cost of the ground preparation work, and the cost of the road structure layer works. The asset value was calculated using a replacement cost of R 830/m² for the road pavement structure and R 553/m² for the ground preparation work in 2010. It was estimated that the potential asset value of the existing paved network in Gauteng was R 51 billion (Current Replacement Cost); thus assuming all roads were in a very good condition. The asset value associated with the network condition as at end of 2010 was approximately R 39 billion (Current Depreciated Replacement Cost). This represented an asset loss of 23.5%. This means that the roads in Gauteng are losing value and urgent funds are required to recover the lost value.

(South Africa. Gauteng Department of Roads and Transport, 2011:p20).

1.3 Problem Review

The problem of road infrastructure backlog in the Gauteng Province may be one concern but more worrisome is the fact that minimum effort has been put in to investigate other avenues to get alternative funding for the roads construction and maintenance projects hence the sole reliance on the government MTEF allocations. Public Private Partnership models are one alternative which can be tried to aid the current situation.

A number of themes can be formulated from the situation facing GDRT and these are:

- **Organisational structure**

For an organization of GDRT's nature which has different functions with some level of autonomy, there is a need for an establishment of a cross functional role. The cross functional role will be to coordinate the functions of all the sections in support of the organizational objectives and strategies in providing an efficient and effective provincial road network. Such a structure with a cross-functional role is regarded as matrix and can bring a number of advantages.

(Burke, 201:p308 to 310).

- **Politics**

Once every five years, new political leadership takes over offices within the Gauteng Provincial Government (GPG). However, the regime changes bring new faces that can either align well with existing strategies or can introduce their own. In some cases, the politicians can go on a spree of replacing strategic office bearers

with their own officials. This in turn creates pockets of individuals loyal to leadership at the expense of formulating objective strategies to improve roads service delivery within the province. The officials replaced are normally transferred against their will to non-influential posts where they cannot object to the “new regime political mandates”. This de-motivates, kills creativity and even creates animosity among GDRT employees whose main focus is supposed to be road construction and maintenance.

Once political leadership changes, priorities for each provincial department change and this includes those of GDRT. Due to the frequency of regime changes, it also means that priorities have a five year cycle. This distorts terribly the planning systems which can no longer allow for long term plans which are beyond five years. Planning for roads projects at provincial levels are ideally supposed to go beyond five years but within the current GDRT set up, it is practically not sustainable. If ever PPP models are to be adopted for Gauteng Roads projects, the payback periods may run beyond five years as commitments and every leader who comes into the picture is supposed to honour that. The challenge would therefore be that the new leadership cannot introduce any new priorities unless the existing commitments are first satisfied. To accommodate new projects he/she has to pursue the idea of securing alternative funds or request for additional allocations, which is however currently proving difficult.

- **Funding**

The GDRT depends on the funds from the government which come annually for its projects. Ideally the plans established by all the branches within the GDRT are supposed to inform the funds released to them. Unfortunately that is not the case because all branches have to plan around funds allocated to them. These

allocations are also governed by what the province would have received from National Treasury. Due to other provincial priorities like health and education among others, roads infrastructure funds are reducing every consecutive year. The main need for alternative funding sources is the fact that the conventional MTEF funds can no longer cope with the demand for road construction and maintenance programmes because of the pressure which is now on the total provincial budget.

- **Skills**

If the strategy for the department is to find ways to establish new ways to reduce the backlog, there is need to prioritise skills development and innovation. This is mainly because any new endeavour may require new skills for it to be successful and innovation will also allow new ideas to be introduced but only if it is well supported.

- **Change**

Because change is normally triggered by the need to adjust to new internal or external conditions, there is a tendency within GDRT employees to wanting to stick to traditional ways of doing things. Since its formation, GDRT has been using the same procurement model which made them depend only on the MTEF budget. Even though Treasury's introduction of a PPP policy meant that government departments could implement PPP models, GDRT has never succeeded in adopting it. Possibly the reluctance to adopt alternative funding models is due to the relationship the staff has developed with the traditional models, the opportunities which those who benefit from the traditional models have created and secured for themselves, the fear of venturing into new concepts which they are not familiar with and the lack of resources and commitment to

establish a skills base which facilitates creativity and lead newly adopted procurement models.

- **Organizational Culture**

Even though a cocktail of cultures exist within the GDRT, there are some common ones which have an effect on the department's core business of providing a world class standard road network. Some of these cultures are the culture of not taking ownership of one's responsibilities, the culture of non-creativity, the culture of mixing politics with organizational business, the culture of not following proper recruiting procedures, the culture of changing long term road maintenance and construction plans arbitrary and the culture of regarding training as a cost and not as an investment for the organization. All these cultures may have a negative effect on road service delivery.

- **Monitoring and evaluation systems**

It is of great concern that the monitoring and evaluation systems used within GDRT are selectively applied to protect the political leadership of the department. Their decisions are not well vetted to see how they fit into existing plans and strategies. Political projects have been introduced on existing finalised lists displacing some genuine priority roads projects. Possibly this is the reason why some roads don't get so much attention resulting in them being in so much of an appalling state. Normally such environments do not encourage private sector participation because of the risks involved.

- **External environment**

Because roads are a service provided to the public, the public tends to have a voice in terms of the quality of roads and the costs they incur to use the network. An example is the resistance posed by unions like COSATU, civil groups like the OUTA and the general public on the e-toll system implemented by SANRAL (Robbie, 2011). If roads are to be tolled, the rates will have to be a compromise even though at times they won't be commensurate to the resources put to construct or maintain that section of road. Policies and legislation also play a role in roads service delivery and these normally emanate from the external environment which the GDRT has minimum control over.

(Bakhru, 2006:p8).

- **Strategic alignment**

Policies which impact road construction and maintenance programmes are supposed to support the strategies which are aimed at reducing the roads service delivery backlog. An example is the Revenue Collection Policy which does not allow the Provincial Roads Department to toll any of their roads. This eliminates the possibilities of applying some models of the Public Private Partnerships. Even the priorities set within GDRT or those which are introduced politically must take heed of the demand which exist to have a rejuvenated approach to bring back to life the road network.

1.4 Problem Statement / Research Statement

Roads service delivery is of great concern within the Gauteng Province. This is predominantly a result of the rigidity which exists in terms of the procurement model adopted in implementing the

projects and Gauteng Department of Roads and Transport's sole reliance on the annual government funding for their projects implementation. Due to the funding trends for road construction and maintenance which are dwindling every financial year, there is need to investigate and adopt, if applicable, the Public Private Partnership models which will entice the private sector to invest its funds into road projects with guaranteed future returns i.e. positive Net Present Values.

Public-private-partnerships (PPP) are a form of engagement known to bring a lot of benefits if properly applied to government organizations. However, the government departments need to adjust their internal environment elements in order to make themselves attractive parties for the private sector to engage with. PPP models have been adopted extensively in the United Kingdom and many other countries including South Africa as well (the Gautrain project is an example). Despite the successes achieved, the models require commitment from all parties involved, resources and ample time to establish the framework within which the parties must engage and operate.

Within the Gauteng Department of Roads and Transport (GDRT), the application of the PPP models to road construction projects has been punctuated with failures. These problems have resulted in some projects being suspended and some taking the legal route costing GDRT a lot of money in legal fees and other penalties. Because of this, the real benefits of the PPP model and the readiness of the GDRT to adopt the model to reduce the road service delivery backlog needs to be investigated. Once investigated, recommendations will have to be made in order to establish a conducive internal environment which gives regard to

the private sector entities willing to participate in road construction programmes under the PPP models.

1.5 Research Objectives

- To ascertain if there is alignment between existing legislation and policies with the strategy to adopt PPPs as alternative funding models within GDRT
- To establish if the existing allocation trends allow for the adoption of PPPs
- To review the suitability of GDRT's internal environmental elements to the adoption of PPP models
- To establish the impact of politics on the adoption of PPP models within GDRT

1.6 Limitations

- No two project cases are exactly the same hence generalisations compromise validity of results
- Resources for the research are limited to what the researcher can afford
- Due to the loyalty some employees have to GDRT, they may feel obliged to respond to the questionnaire in a more polite way which do not expose the incompetence which exist internally
- Not much literature exist about PPP models
- Because of the politics involved in public institutions, information might not be easily accessed

- Information about failed applications of the PPP models may not be made so public to protect the reputation of the parties involved hence making it difficult to access information
- Time is a limitation to extensively exhaust all that exists which may give answers to the thesis
- Since the PPP models were extensively applied in the United Kingdom, access to information may be limited by distance, hence researcher will be forced to rely on the internet for information
- The sample size cannot be extended to include other sections within and out of GDRT but will only focus on individuals directly involved with construction and maintenance projects.
- PPP models have not yet been applied enough within GDRT, to justify a quantitative approach of analysis which can allow for categorical conclusions.

1.7 Delimitations

- Even though several themes may have an effect on the applicability of the PPP models to road construction and maintenance programmes, only major ones will be focused on
- Even though the private sector opinion would be relevant to the research, focus in selecting the sample will be on GDRT employees in contact with project implementation

1.8 Importance of the Study

Considering the existing difficulties the Gauteng Department of Roads and Transport (GDRT) is facing in terms of roads service

delivery, there has grown a need for innovative thinking to reduce the existing backlog. Since one impediment in providing a first class road network is funding, this study will unearth factors which may be hindering the successful implementation of the Public Private Partnership models in road network construction and maintenance programmes as an alternative funding source within GDRT. The advantages of the PPP models will be highlighted with the aim of stimulating initiatives and alignments which support the PPP models.

1.9 Research Assumptions

The research assumptions are that:

- The sample chosen represents well the population within GDRT
- All respondents give their honest and genuine responses
- The responses given portray the real situation within GDRT
- All respondents understand the purpose of the research and the questions on the questionnaire before answering

1.10 Outline of Report

The research report will be split into seven chapters and each chapter will cover specific aspects of the research. Each chapter is opened with an introduction which pulls the string from the conclusion of the preceding chapter and ends with a conclusion which sets the tone for the next chapter. The anticipated flow is as follows:

- **Chapter 1**

This chapter covers the introduction, the problem in context, problem review, problem statement, SMART research objectives, research questions the importance and benefits of the research and limitations and delimitations of the research topic. Themes to pursue in the research emerge in this chapter and are followed up in the proceeding chapters

- **Chapter 2**

This deals with the analysis of the problem in detail. Focus is on the themes developed in chapter one's problem review. Business models introduced logically are adopted in this chapter to unravel the hidden complexities about the problem in question. A proper business case is developed in this chapter

- **Chapter 3**

This chapter mainly focuses on the opinions of various authors on the subject. This is the literature review chapter and it continues with the themes, objectives, field of study and the problem statement established in chapter one and two. The business case is developed further by considering the opinions of different authors.

- **Chapter 4**

This is a very theoretical chapter where the research methods are discussed. Their theories and applications to the problem are discussed. Each heading is opened with the relevant theory and followed up with the practical application to the problem.

- **Chapter 5**

This chapter focuses on the research results and discussions. This is where the extent to which the objectives have been met has to be

portrayed. In the discussions, reference will be made to the relevant literature as well.

- **Chapter 6**

This is where an argument for or against the research statement is built. Conclusions and recommendations on the research topic are made including recommendations for further studies on the topic.

- **Chapter 7**

This chapter contains all the references used in the research.

- **Chapter 8**

This chapter contains all the appendices used within the report

2 Chapter 2: Problem Analysis / Theoretical Considerations

2.1 Introduction

To unravel the topic in question, the objectives of the study and the themes which emanated from the problem review, a number of business models can be applied. When applied, the business models will assist in establishing the elements which ought to be considered in determining the readiness of GDRT to implement the Public Private Partnership models and also in developing a business case for the research. The business models will inform the data to be collected and the method used for the collection together with the analysis which will be carried out.

2.2 Public Private Partnerships

A typical PPP model involves contractual arrangements between parties which include the government, the project sponsors, the project operator, the financiers, the suppliers, the contractors, the engineers, third parties and the customers as shown in a typical PPP model contained in figure 4.0.

(UNESCAP, 2007:p11).

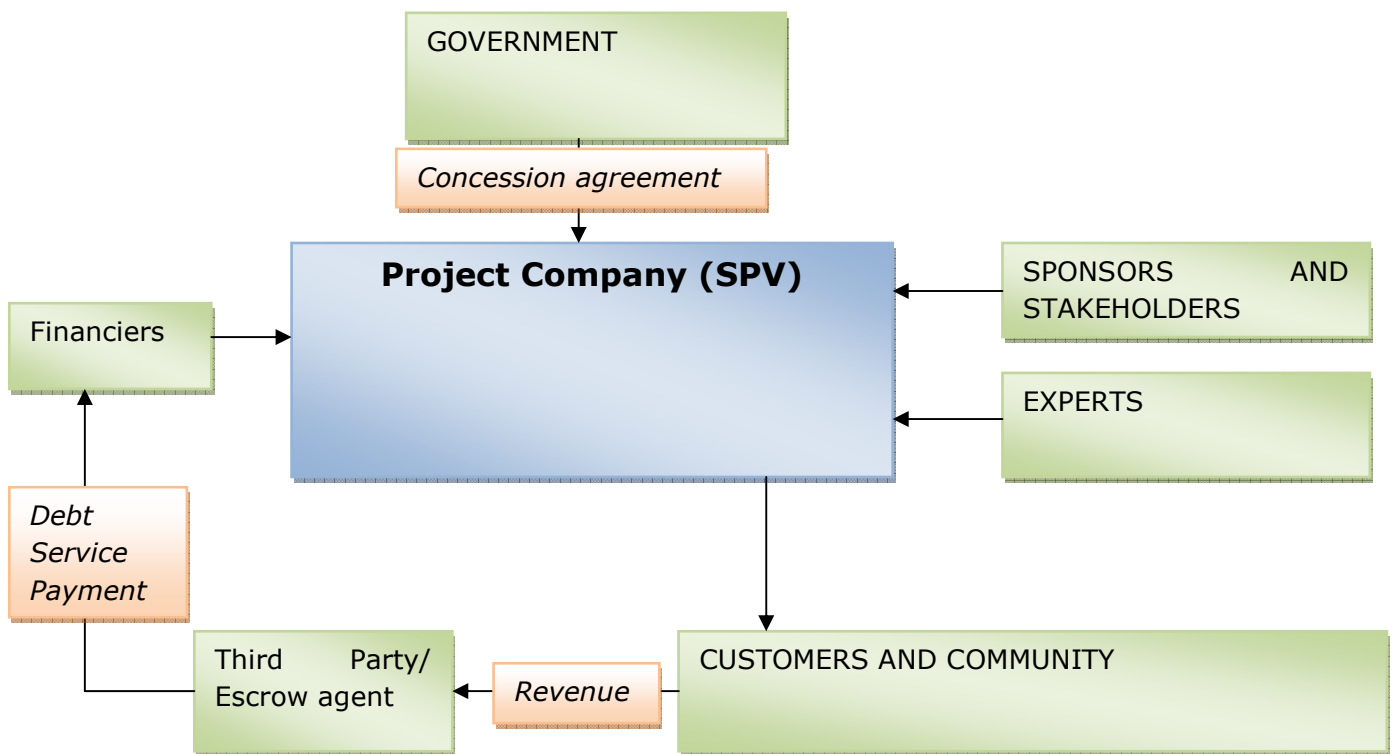


Fig 4.0: Typical Structure of a PPP model (UNESCAP, 2007:p11)

- SPV

This is introduced in some cases as a key feature of PPPs. It is the legal entity that undertakes a project and all its contractual arrangements between various parties. It facilitates all negotiations between various parties. SPVs are preferred in situations where lenders rely on the project's cash flow and security over its assets as the only way to repay debts. It is usually set by the private concessionaire/ sponsor who in exchange for shares representing ownership in the SPV contribute the long term equity capital, and agree to lead the project. The government may also contribute to the long term equity capital of the SPV in exchange for shares. In these cases, the SPV is established as a joint venture company between the public and private sectors and the government

acquires equal rights and equivalent interests to the assets within the SPV as other private sector shareholders.

(UNESCAP, 2007:p12)

- Third Party/ Escrow agent

This is an agent appointed by the project company and the lenders for managing an account called an "Escrow Account". The escrow account is set up to hold funds (including project funds) accrued to the project company. The monies will then be disbursed by the escrow agent to the various parties in accordance with the conditions of agreement. The escrow account also holds a deposit in trust until certain conditions are met.

(UNESCAP, 2007:p12)

A wide spectrum of PPP models exist to enable private sector participation in providing infrastructure facilities (Supply and management contracts, Turnkey Projects, Affermage/ Lease, Concessions and Private ownership of asset). The PPP models vary from short term simple management contracts to long term and very complex ones. These models mainly vary by ownership of capital assets, responsibility for investment, assumption of risks and the duration of the contracts. Figure 5.0 shows the level of involvement associated with each PPP model and the level of risk assumed.

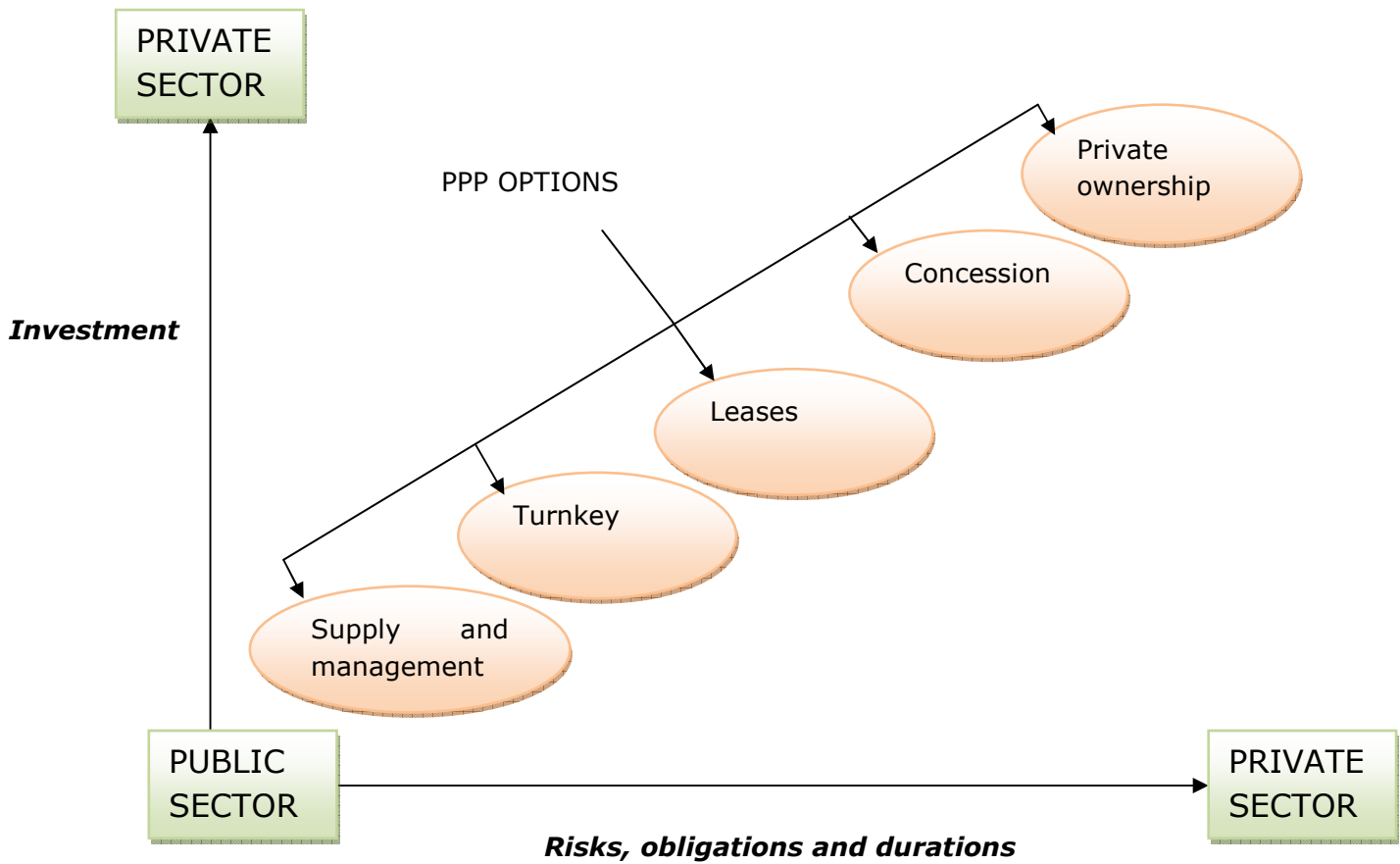


Fig 5.0: Level of Investment, risks, obligations and durations associated with various PPP models (UNESCAP, 2007:p13)

2.2.1 Supply and management

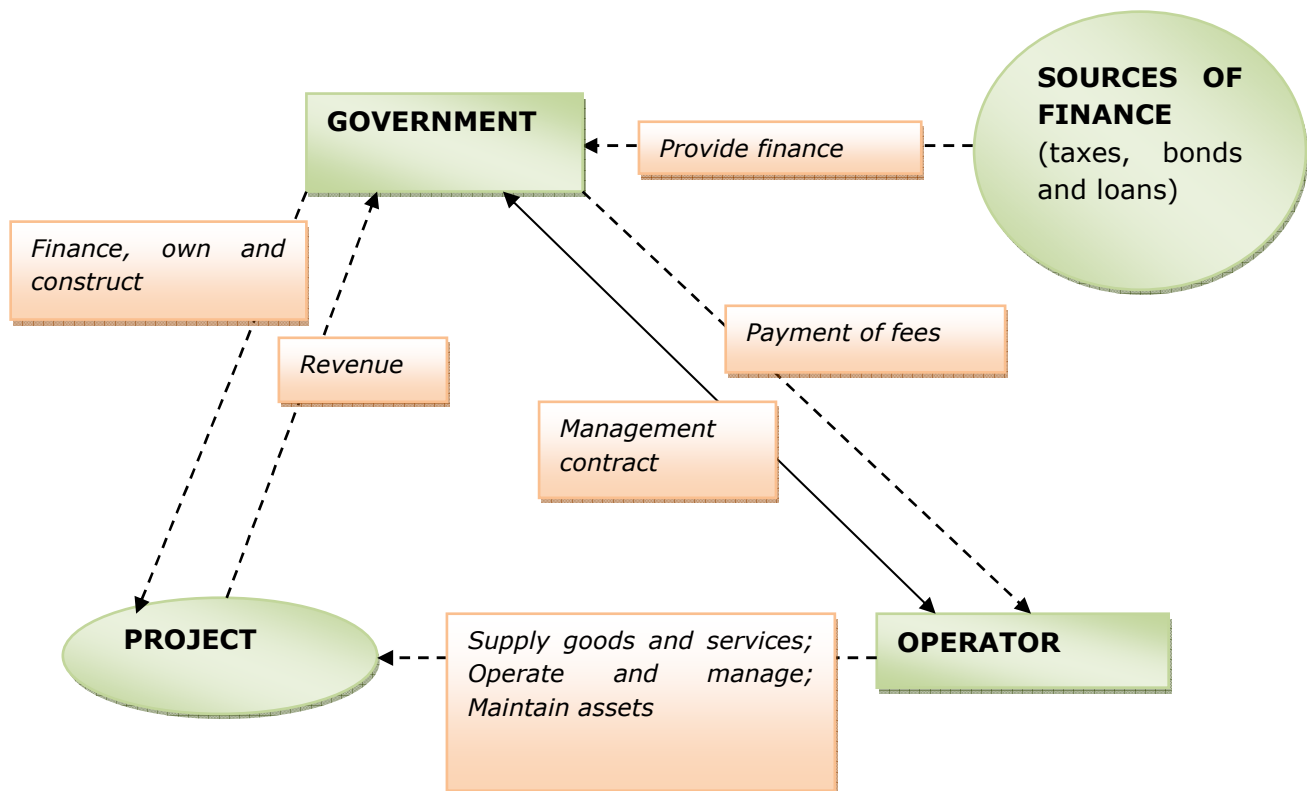


Fig 6.0: Supply and management model (UNESCAP, 2007:p15)

These types of contracts represented in figure 6.0 allow the private sector skills to be brought into the service design and delivery, operational control, labour management and equipment procurement because the private sector will be managing part or whole of the public enterprise. The public sector will maintain ownership of the facility or equipment and the private sector will only be responsible for specified services without any commercial risks. The private sector is paid a performance based fee and the contracts are normally short unless they are for complex operational facilities like airports. This form of contract had its advantages and disadvantages as well. These are contained in table 1.0.

Table 1.0: Advantages and disadvantages of the Supply and Management model (UNESCAP, 2007:p15)

ADVANTAGES	DISADVANTAGES
Can be implemented in a short time	Efficiency gains may be limited and little incentive for the private sector
Least complex of all broad categories of PPPs	Almost all risks are borne by the public sector
It is more socially and politically acceptable	Mostly applicable to existing infrastructure assets

2.2.2 Turnkey

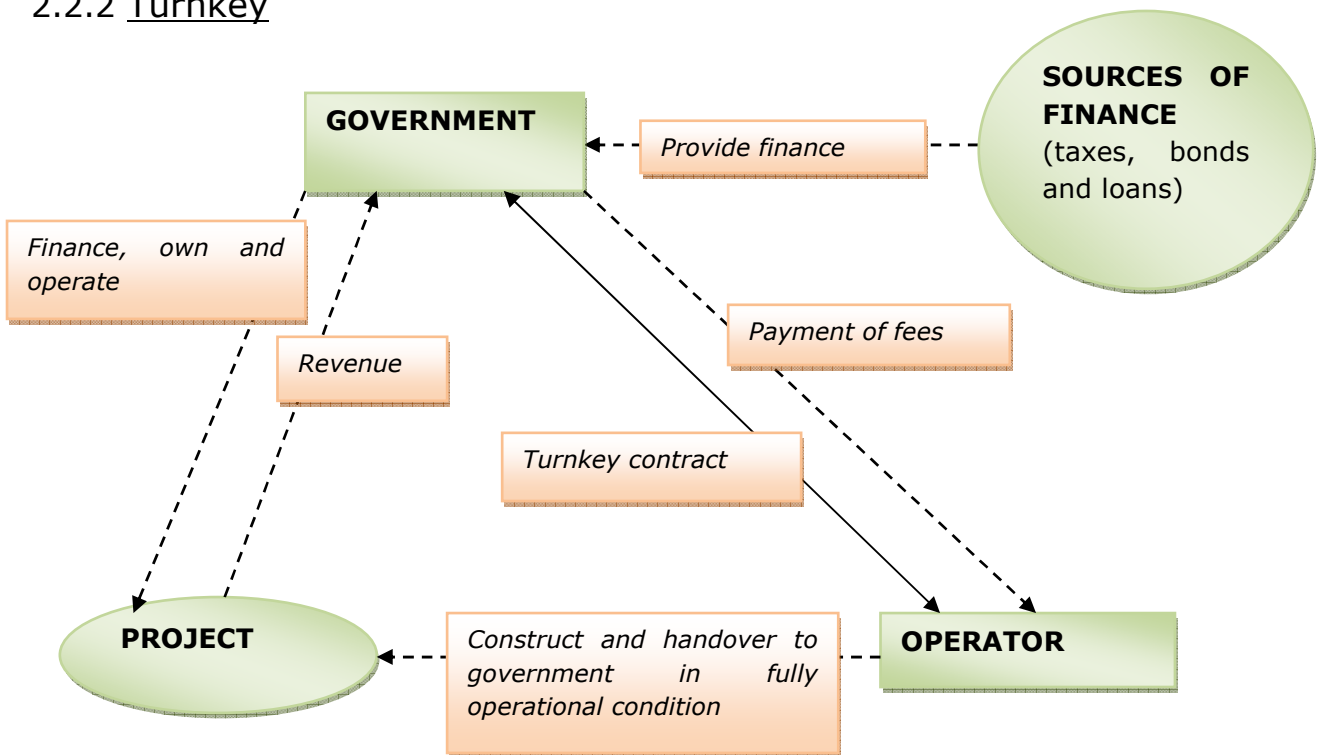


Fig 7.0: Turnkey model (UNESCAP, 2007:p17)

In this type of contract shown in figure 7.0, a private contractor is selected through a bidding process to design and build the facility for

a fixed fee, rate or total cost which is one of the criteria applied to select the winning bid. The contractor assumes risks involved in the design and construction phases. The scale of investment by the private sector is generally low and for a short term and there is no strong incentive for early completion of the project. The advantages and disadvantages of this model are shown in table 2.0.

Table 2.0: Advantages and disadvantages of the Turnkey model
(UNESCAP, 2007:p17)

ADVANTAGES	DISADVANTAGES
Well understood traditional model	Private sector has no strong incentive for early completion
Contract agreement is not complex	Almost all risks except those in the construction and installation phases are borne by the public sector
Contract enforcement is not a major issue	Low private investment for a limited period
	Limited innovation may be possible

2.2.3 Affermage/ Leases

Lease: The operator retains all revenue collected and pays only the agreed fee to government

Affermage: The operator and the government share revenue from the customers

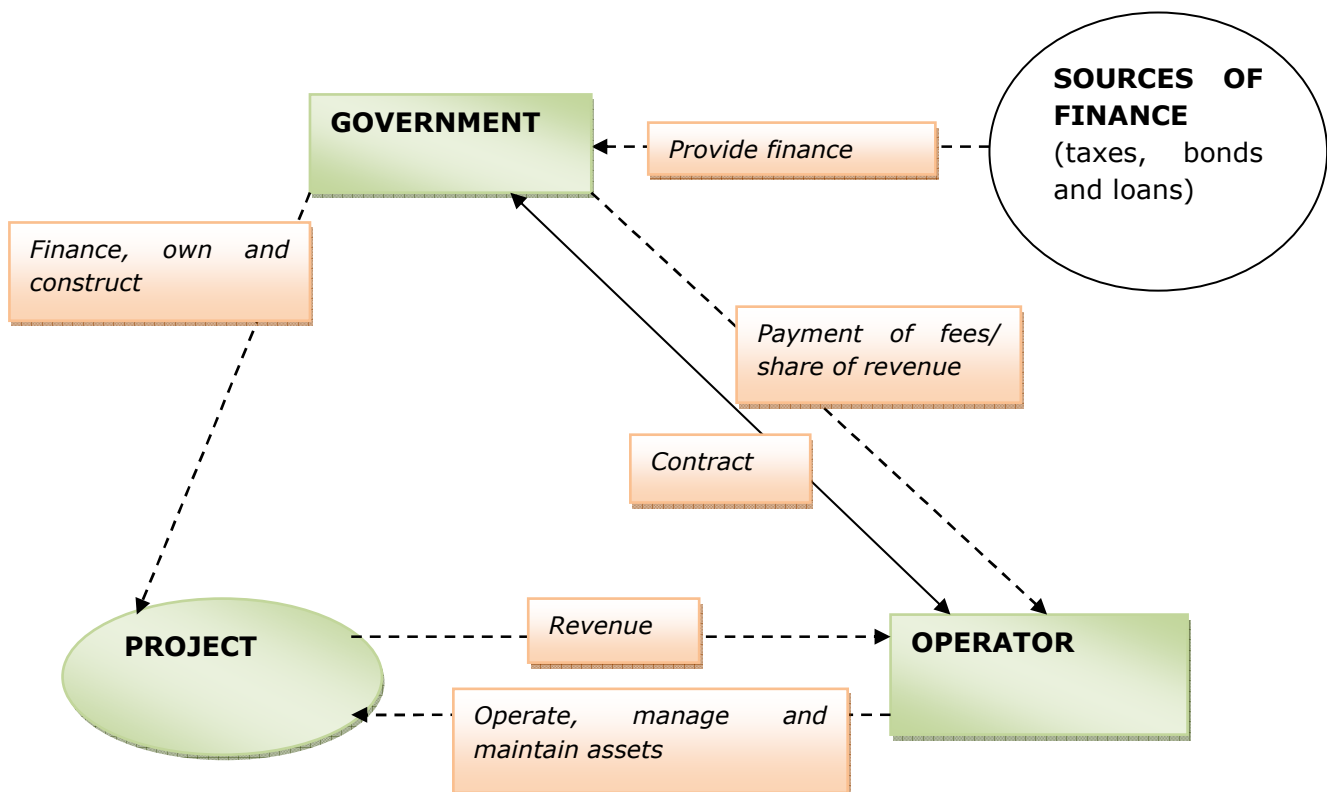


Fig 8.0: Affermage/ Leases model (UNESCAP, 2007:p18)

In this model shown in figure 8.0, the operator is responsible for operating and maintaining the infrastructure facility and services. The model can be combined with other models to include the building responsibility where the private part won't just operate but constructs the infrastructure as well. In an ideal lease/ affermage model, the operator takes lease of both the infrastructure and equipment from the government for an agreed period. The government takes the responsibility of investment together with the

risks but the operational risks sits with the operator. The facility uses are normally specified and lease value is calculated based on the revenue potential of the facility or service.

Table 3.0: Advantages and disadvantages of the Affermage/ Leases Model (UNESCAP, 2007:p18)

ADVANTAGES	DISADVANTAGES
Can be implemented in a short time	Has little incentive for the private sector to invest
Possible significant private investment possible under longer term agreements	Almost all risks are borne by the public sector
Contracts are more socially and politically acceptable for strategic projects	Generally used for existing infrastructure assets
	Considerable regulatory oversight required

2.2.4 Concession

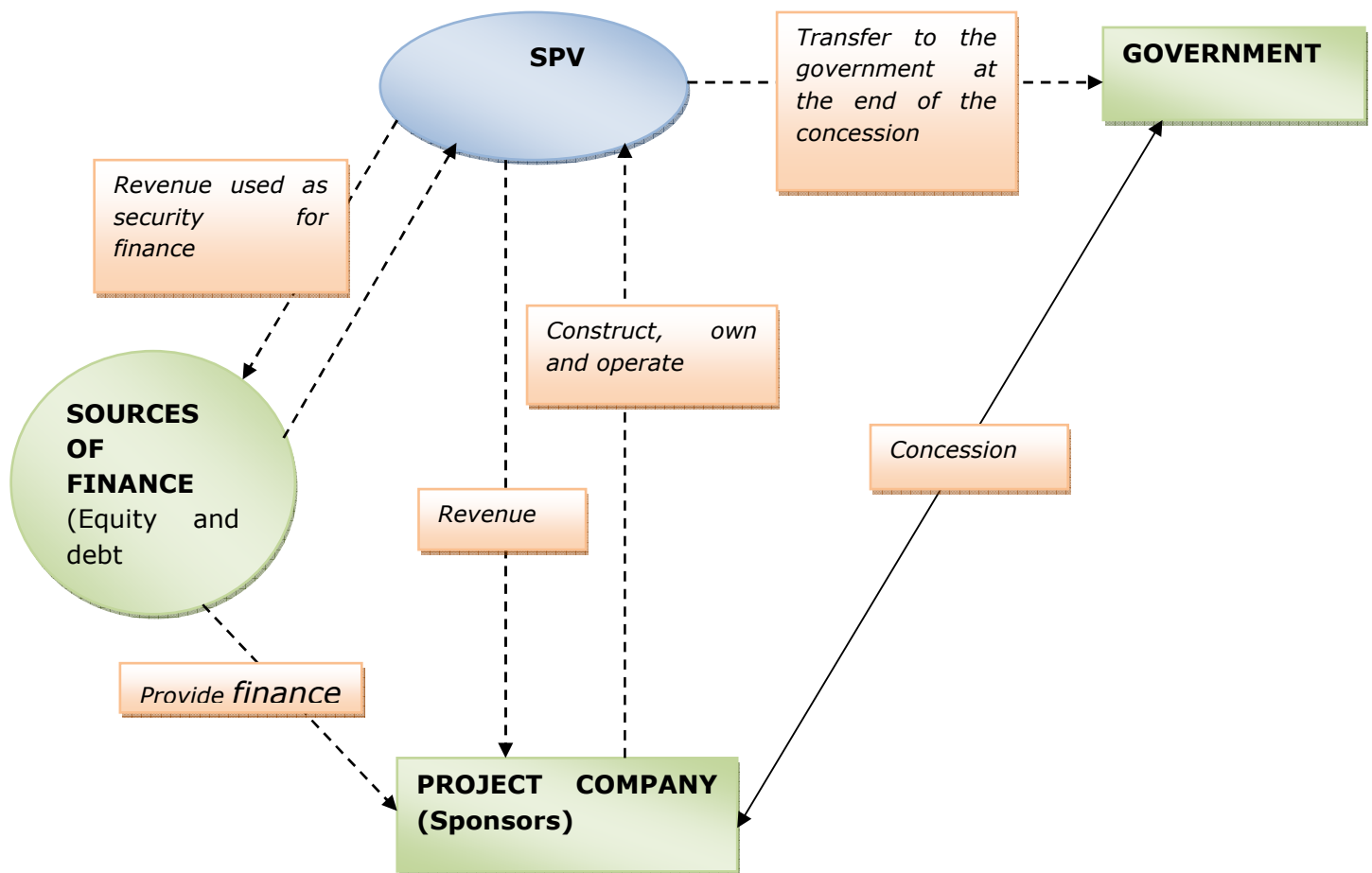


Fig 9.0: Concession model (UNESCAP, 2007:p20)

In this model shown in figure 9.0, the government defines and grants specific rights to an entity to build and operate a facility for a fixed period of time. The government may retain ownership of the facility and /or the right to supply the services. The concessionaire pays the government for the concession rights and in cases the government may also pay the concessionaire to make the deal commercially viable for the private party or to reduce the level of commercial risk borne by the private sector. This is normally done in countries where the private sector does not have enough confidence in the economy. Depending on the agreement, if the

concessionaire fails to reach a certain threshold in terms of revenue generated by the facility, the government may have to pay the deficit and in some cases where the concessionaire gets more revenue beyond the threshold, they may have to pay some of the additional earnings to the government.

Table 4.0: Advantages and disadvantages of the Concession Model
(UNESCAP, 2007:p19)

ADVANTAGES	DISADVANTAGES
Private sector bears much of the risks	Highly complex to implement and administer
High level of private sector investment	May have underlying fiscal costs to government
Potential for efficiencies in all parts of the project	Contract negotiation takes time
Technological innovation is high	May require close regulatory oversight
	Contingent liabilities to the government in the medium to long term

2.2.5 Private ownership

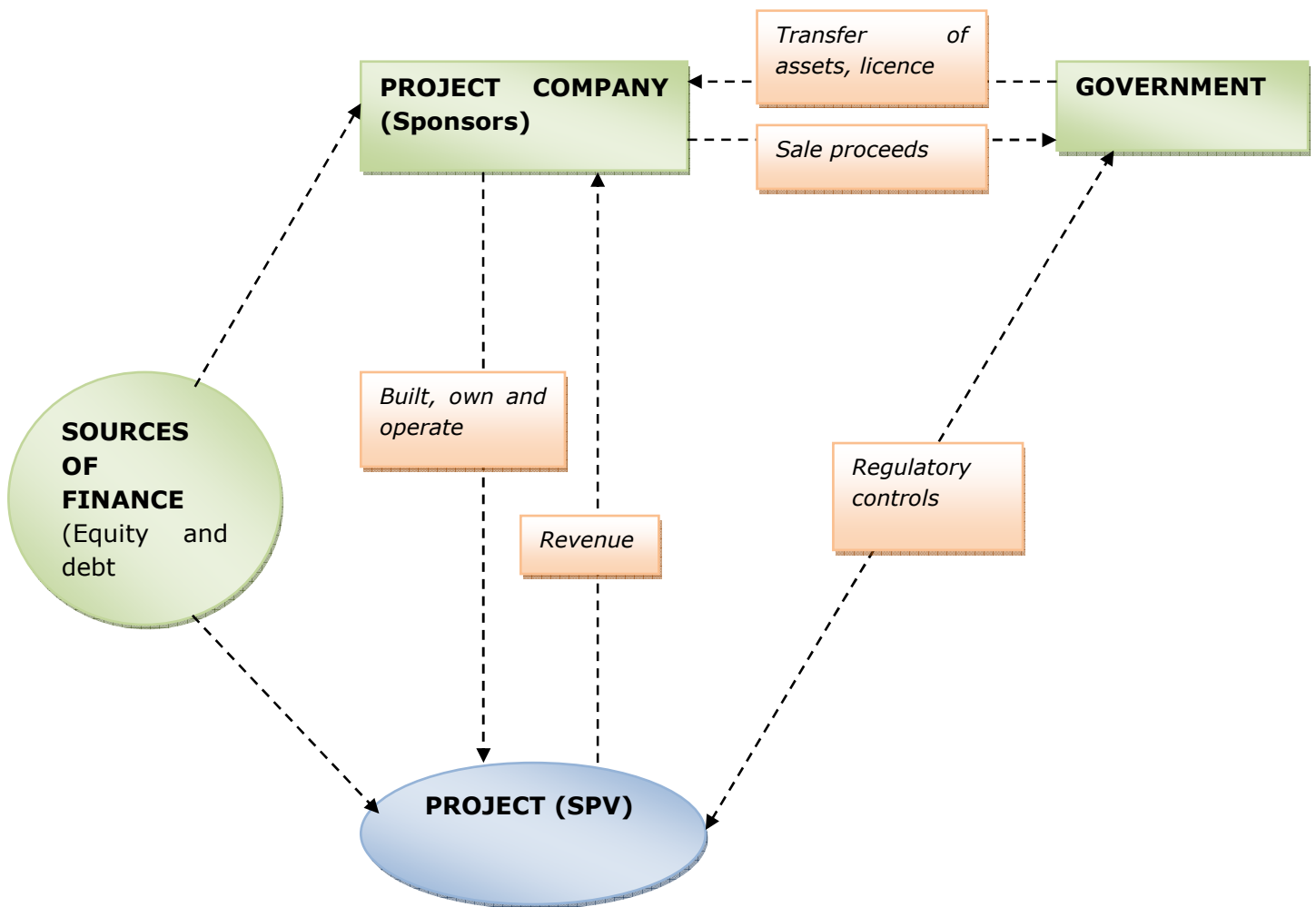


Fig 10.0: Private Ownership Model (UNESCAP, 2007:p22)

In such contracts shown in figure 10.0, the private sector remains responsible for the design, construction and operation of the facility and in some cases, the government may relinquish the right of ownership of the asset to the private sector(built –own –operate). To gain ownership of the facility the government may then buy the facility from the operator over time (Private funding initiative). In

some cases, the private sector may own a part of the asset while the public sector owns a portion (divestiture)

Table 5.0: Advantages and disadvantages of the Private ownership Model (UNESCAP, 2007:p22)

ADVANTAGES	DISADVANTAGES
Private sector bears much of the risks	Complex to implement and manage the contractual regimes
High level of private sector investment	May have underlying fiscal costs to government
Potential for efficiencies in all parts of the project	Contract negotiation takes time
Technological innovation is high	Regulatory efficiency very important
	Contingent liabilities to the government in the medium to long term

Considering all the PPP models, GDRT would need to adopt one that is aligned with its strategies. The model adopted must take cognisance of the policies, legislation, the risks involved and the economic situation. However, it will be very necessary for GDRT to put effort to make itself attractive to the private sector. This can be achieved through the creation of an environment which is professional and economically viable for the private parties. Generally, skills shortage haunts GDRT and it is extremely critical to have skilled project and contract managers to run any adopted

model. Once adopted, the PPP models also allow for further skills transfer from the private sector personnel to government employees.

The model currently being applied by GDRT exposes it to all the financial risks because of the limited involvement of the private sector. GDRT bears the risks of inflation, interest rates and any escalations. Due to the inefficiencies of government, delayed payments resulting in interest payments are common and delayed completion dates expose the projects to more financial risks. In the currently applied model, the private sector is only appointed to do the designs and to construct, but all the funds will be coming from the government. The model is very similar to the Turnkey with the only difference being that the designers and contractors are appointed separately.

The concession and private ownership models would be most ideal to rescue the situation with regards to roads service delivery backlog because the private sector would bear the financial risk due to their great involvement in the projects. The challenge would therefore be that because the private sector would be operating the facilities, they will have to charge the road users to recoup their funds. This would mean that policies allowing revenue collection on provincial roads will have to be in place and consultations with the public and pressure groups will have to be carried out before implementing the model. Failure to do this will mean that the model will be faced with a lot of resistance like the SANRAL E-Tolling project (Robbie, 2011).

In some instances, government chip in with subsidies or even meet all the costs in full to protect the public from the harsh realities of

User Pay Models like that adopted for the Gauteng Freeway E-Tolling Project. Unfortunately, this will still put pressure on the government budget because all that would have happened is to defer the expenditure and financial risks of GDRT from the time of constructing or maintaining the roads, during which private funds are used, to the time when payback has to be done. Unless long term plans are in place for government allocations to accommodate the future payback instalments, the scenario will not be so 'healthy' in the long term.

2.3 Organizational Structure

Because all the functions have to be aligned and coordinated in support of the PPP model if adopted, there is need for someone to play a cross-functional role to bring together all the functions. The coordination can only be achieved if the structure is matrix in nature where an independent function seeks resources and expertise from all the functions and resource the projects implementation team (Burke, 2010:P308 to 310. This is illustrated in figure 11.

CURRENT STRUCTURE (Functional)

IDEAL STRUCTURE (Matrix)

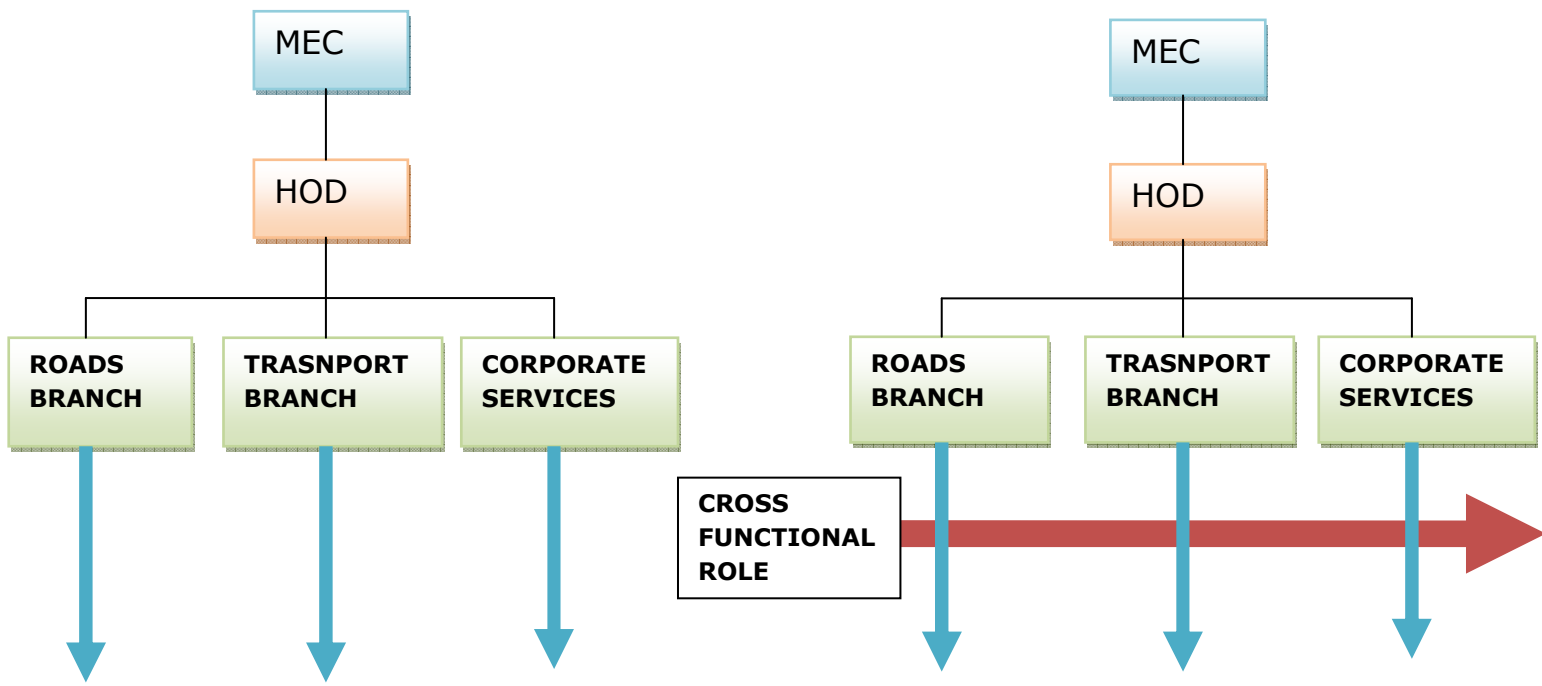


Fig 11: Project Organizational structures (Burke, 2010: P308 to 310)

2.4 The External Environmental Elements

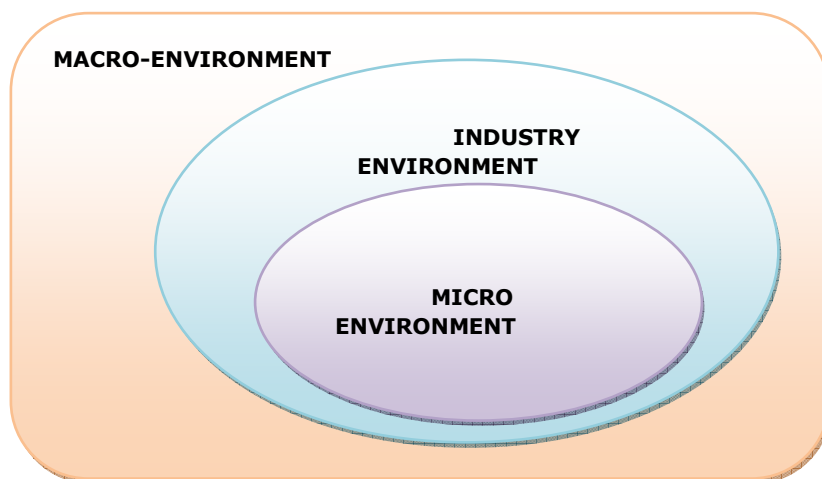


Fig 12.0: The External Environment (Bakhru, 2006:8)

The external environmental model emphasises the existence of three different environments an organisation operates within. As one moves from the micro environment to the macro environment via the industry environment circle, the level of control of any entity drops as illustrated in figure 13.

(Bakhru, 2006:p9)

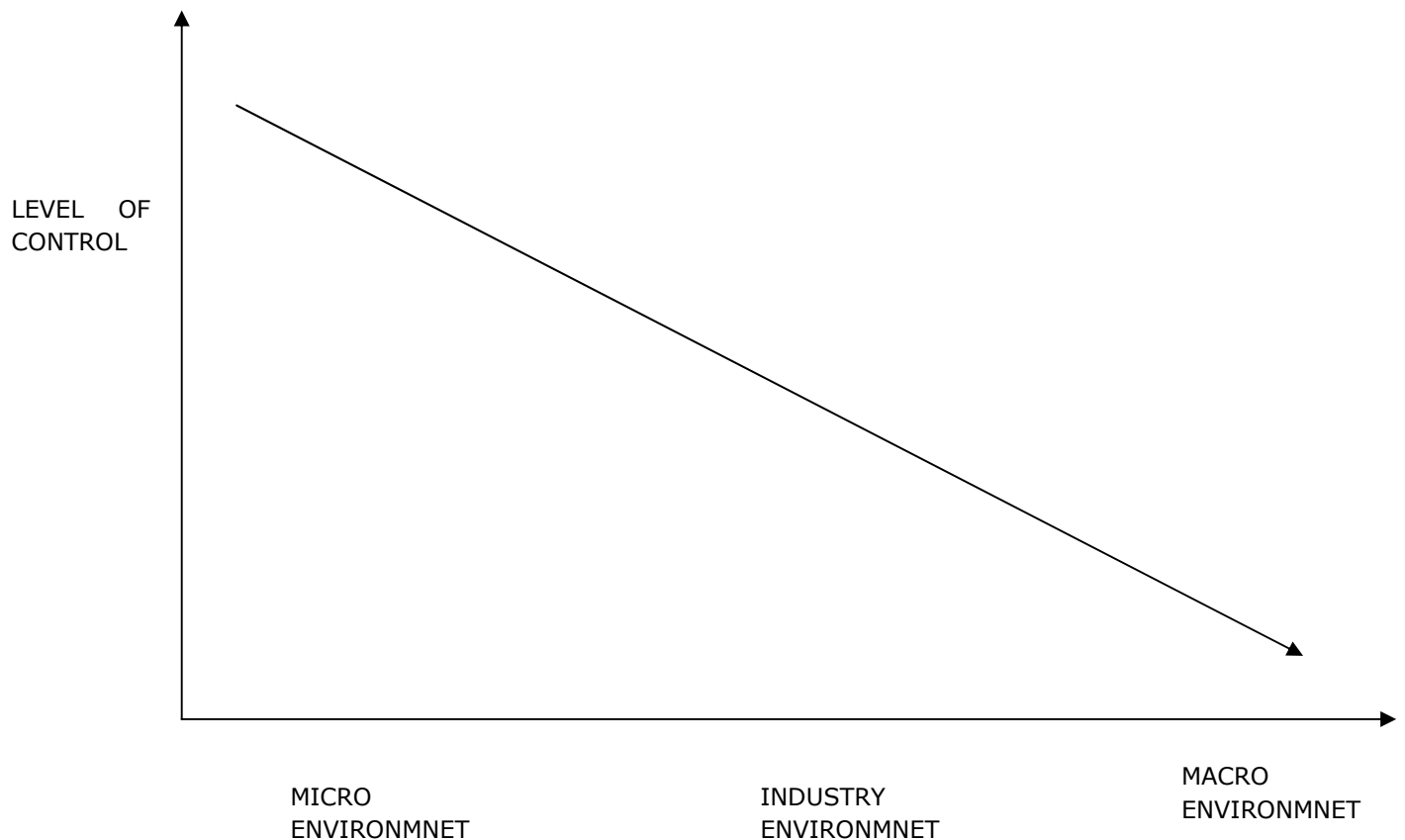


Fig 13: The Variation of control levels across organizational environments (adopted from Bakhru, 2006:p9.)

The macro environment is mainly made up of the economic factors, political factors, social factors and technological factors which an organization hardly has control over (see figure 13.0) (Bakhru, 2006:p10). The industry environment is where Porter's five forces come into play because that environment is made up of suppliers, buyers, potential entrants to the industry and possible providers of substitute services or products being provided (Bakhru, 2006:p20). The micro environment is closer to the internal environment and is made up of elements which the organization has more control over.

The essence of the external environmental analysis is mostly to assist an organization in making decisions informed by the environmental dynamics. With reference to GDRT's pursuit for an alternative funding model, it is prudent to consider all the three environments. This is because they all contain elements which impact on its decision to engage in PPPs both directly and indirectly as enunciated in the following discussions.

2.4.1 The macro environment

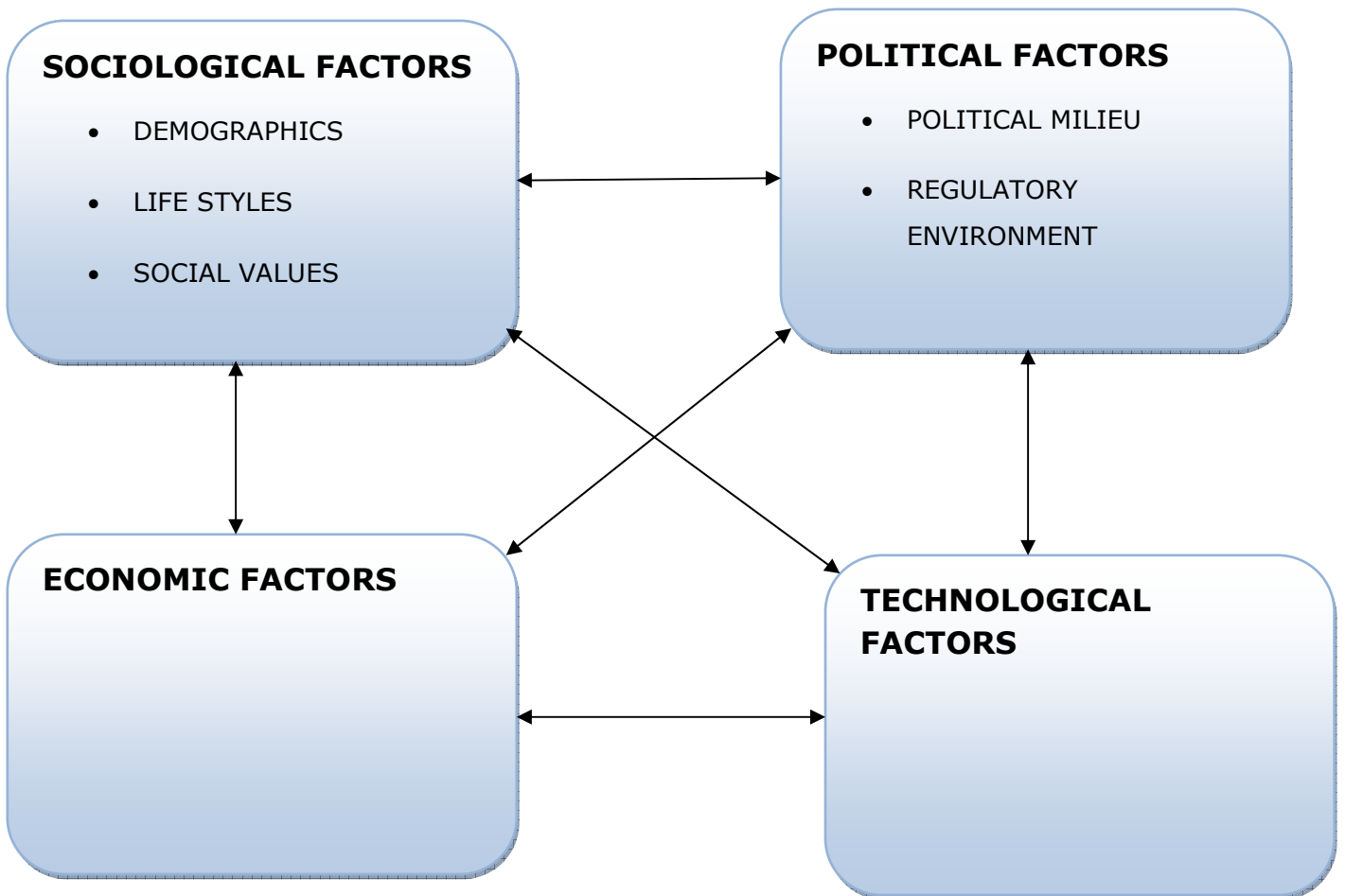


Fig 14.0: Model of the macro-environment (Fahey and Narayanan, 1986) (as cited by Bakhru, 2006: 10)

The macro environment denotes all forces and agencies external to a firm and in this analysis it refers to all those forces and agencies outside GDRT which it cannot have control over (Bakhru, 2006:p9). Some of the factors are:

Political Factors

By virtue of GDRT being a government entity, politics become a very dominant factor. By their nature, PPPs have medium to long term commitments which have to be honoured against all odds. This is

because repayments may take more than five years to be concluded. This condition may therefore not fit into the political architecture of GDRT. Due to the fact that the provincial political leadership is changed every five years, in accordance with the constitution, it may then become a risk to the private party to engage in any commitment because normally new leadership come with new priorities with minimum regard to the existing ones.

Because all GDRT projects are guided by government priorities and policies, PPP models have to be panel adjusted to suit these. It is possible that the level of modifications to the models may make the deal unattractive to the private party resulting in the private sector shunning all engagements with government entities. Examples are the Jobs Creation Policies, the Contractor Development Policies, the skills Development and Transfer Policies and the BBBEE policy.

(South Africa. Gauteng Department of Roads and Transport, 2011:24, 39, 52).

Due to the fact that some of the small contractors and labourers need time to get to a point where they really perform, the private party may feel it negatively affects his progress, and ultimately his profits as well. These pre-set conditions by government may therefore compromise the attractiveness of the deals.

The Revenue Collection Policy which prohibits all local government departments to collect revenue hinders GDRT from directly adopting models like the concession model where the public will have to pay some money to use the services. In terms of roads services, these fees would be in form of tolls.

Economic factors

Due to the state of the world economy, South Africa has not been spared. This is mainly because its economy is also global and exposed to foreign economic dynamics. Unfortunately for the private sector to take up the economic risk associated with PPP models they tend to charge a fortune. This makes the PPP models too expensive to just be adopted without enough justification.

The economic factors determine the funding trends for the roads projects as well. Long term commitments associated with PPPs may be compromised if the economy becomes so volatile.

Economic factors may also determine whether the public would be willing to pay extra for the services or not. Because the government has a social responsibility to its people, it therefore considers the impact of the economy on an ordinary citizen before adopting any model where the public has to pay for. If consultations are not done adequately, it may result in massive resistance.

Sociological Factors

If ever GDRT is to adopt the PPP models, there will be need to consult the public. If that process is not done properly there will be a lot of resistance from the public especially if the concession or private ownership model is adopted. A good example is what happened with the e-toll project in Gauteng where civil groups, unions, political parties and the general public flatly resisted the implementation of the e-toll system. This has now become a SANRAL liability because they had anticipated returns as soon as the project was commissioned but people and pressure groups could not easily buy-in.

Government has even committed to inject some funds so that the fees may be reduced to accommodate the public concerns.

(Robbie, 2011)

This form of resistance is normally due to the hard economic conditions and the lifestyles which the public get used to. Within Gauteng, people were used to low road user costs and the introduction of tolls meant adjusting their budgets which would obviously result in a negative social impact. These dynamics therefore pose a threat for GDRT if it attempts to engage with the private sector without enough justification and an adequate analysis. However, that is one of the main reasons why GDRT has to thoroughly scan the macro environment before implementing the PPP models.

Technological Factors

If GDRT has to engage in PPPs, it must make sure that the private entities with the required technology for building or maintaining roads are available. The PPP models may not be viable if the available technologies within the private sector are not suitable for the work at hand. Also technological skills are relevant within the public entity because there will be need for the government teams to manage the PPP contracts.

2.4.2 The industry environment

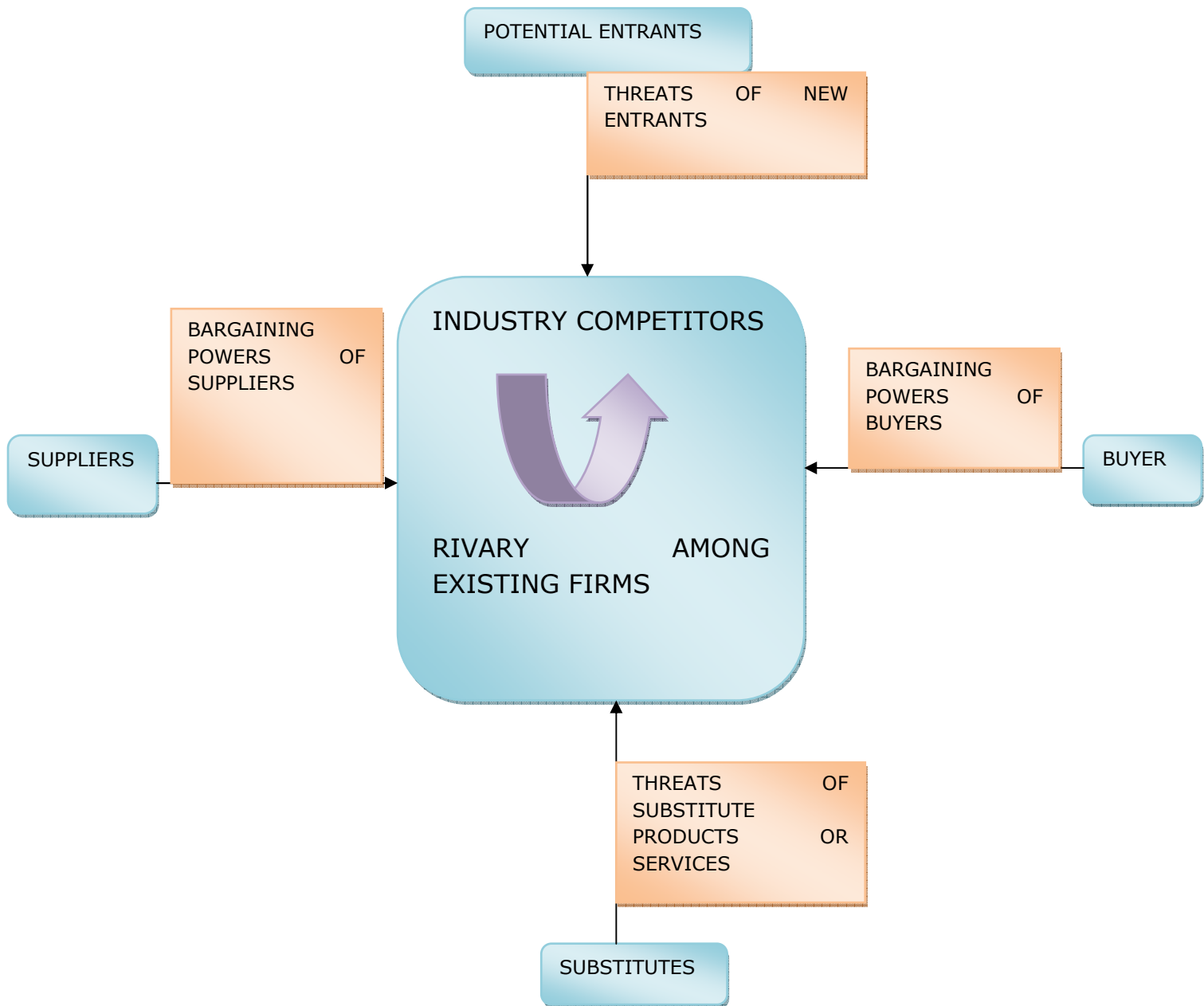


Fig 15.0: Five forces of competition (Porter, 1980) (as cited by Anjali Bakhru, 2006: 20)

Porter's five forces model best describes the dynamics of the industry environment. Because GDRT is a government department which is not profit making, suppliers, substitutes and potential

entrants do not really apply to it. The only competition it may have is for skills which may be sought after by other entities in similar industries. There is no possibility of substitute road services provider hence that element is not so important for the analysis.

However, if GDRT is to adopt the concession or private ownership PPP model, the buyers, who will be road users in this case, may have a voice. There will be no situation where toll fees will be set without consultations with the various associations which speak for road users. This enhances the bargaining powers of the buyers who in this case are the road users.

In terms of the suppliers' bargaining powers, the private sector in the PPP engagements will be regarded as the suppliers. Their bargaining powers would be determined by their numbers within the industry. The fewer they are the more powerful they become. Also the more experienced and skilled they are the more they would want to raise their prices.

2.4.3 Micro environment

The micro-environment denotes those elements over which GDRT has some level of control over and can manipulate to achieve its objectives (Bakhru, 2006:p9). Failure to manage the micro environment elements shown in figure 16 may result in a cocktail of challenges which may hamper the achievement of the strategy to adopt PPP models.

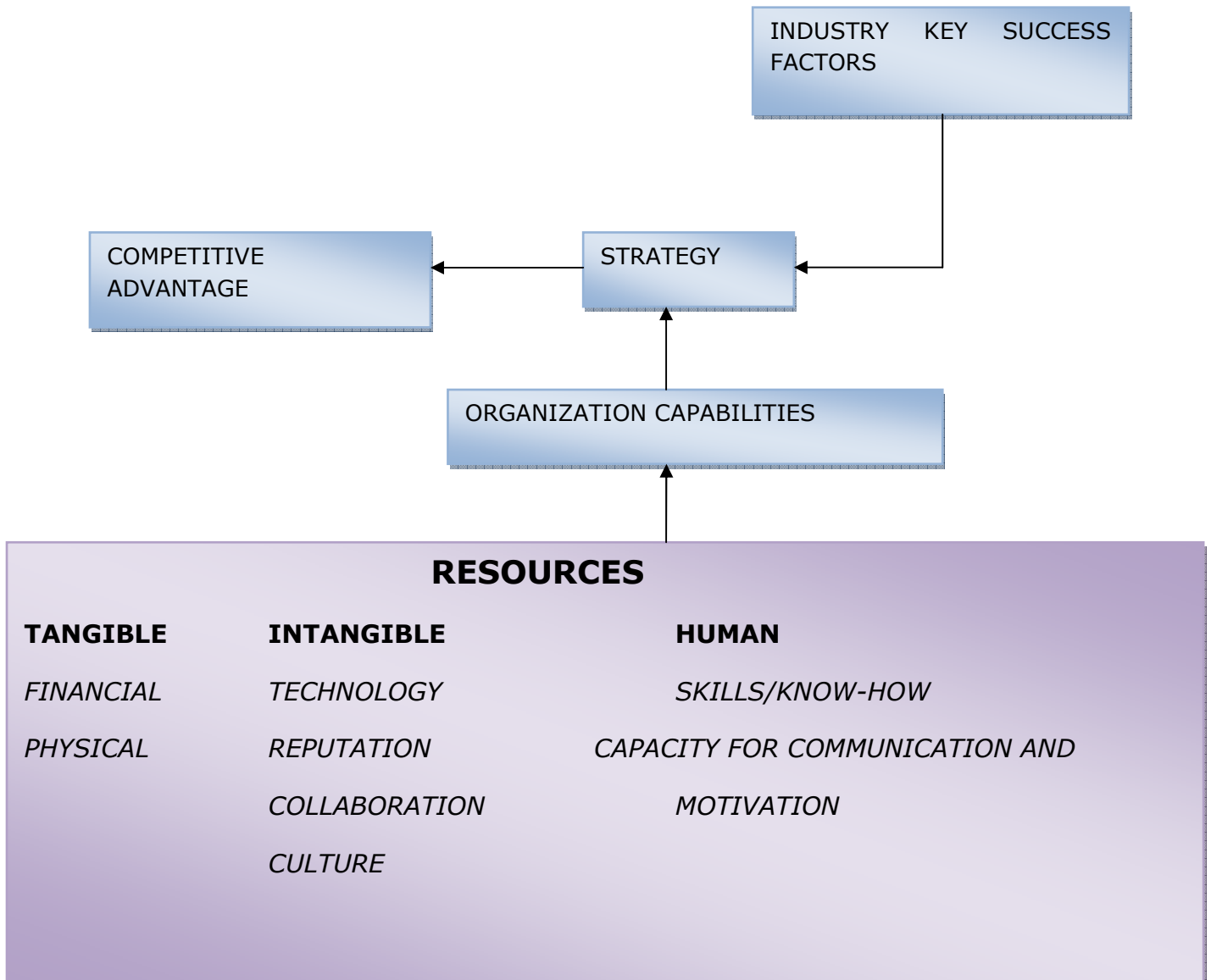


Fig 16.0: The links among resources, capabilities and competitive advantage (Grant, 2010:127)

According to the model by Grant, 2010, shown in figure 16.0, the organization's capacity made up of tangible, intangible and its human resources determine enable it to implement successful strategies. This means that even the introduction of PPPs within GDRT would also need enough resources. Due to their complex nature PPPs require the skills for the contracts to be implemented and managed. The culture would also need to be ideal for the engagement with the

private sector because systems and processes will be altered to suit the new strategy. The private sector wouldn't also be willing to deal with a public entity with a poor reputation in terms of delivering on its commitments and the general internal processes. This makes reputation very important. Due to the need to have sustainable future commitments, it means there is need for a financial muscle within the public entity. This capacity will allow commitments to survive other dynamics which may result in new commitments and priorities being brought up.

All these resources therefore determine whether the government is capable of taking on the PPP strategy or not.

2.5 Alignment of Organizational Culture, Policies and Organisational Structure with Organizational Strategies and Priorities

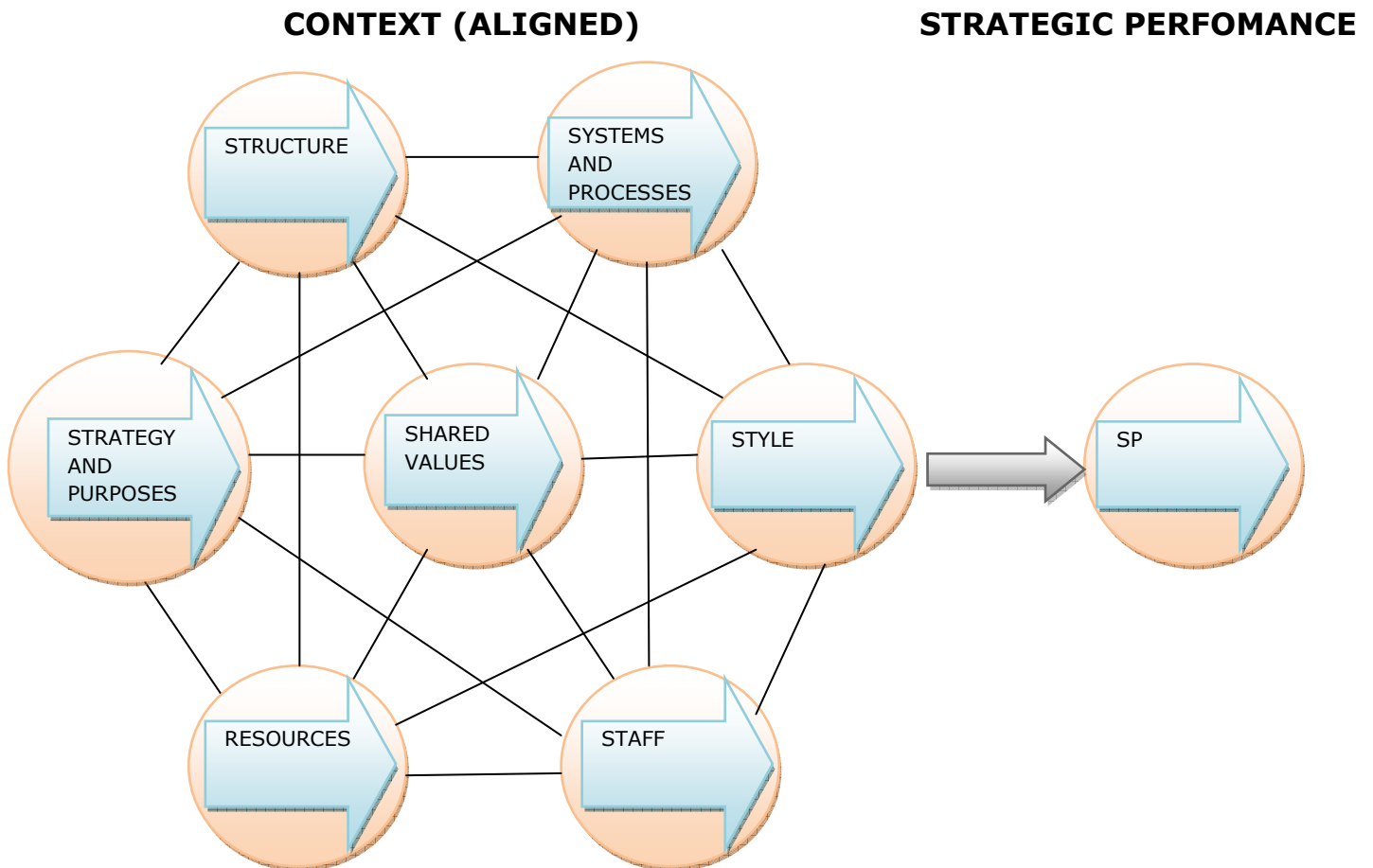


Fig 17: The eight "S"s of strategy execution model (Higgins, 2005: 5)

The eight "S"s of strategy execution model implies that for any strategy of endeavour to be successful, there is need to align the different elements within an organization with what is aimed to be achieved (Higgins, 2005: 5). A slight misalignment will have a ripple effect on all the other elements involved. In relation to GDRT's efforts to reduce the roads service delivery backlog through adopting PPP models, there is a need for that alignment to be alive internally. All the different sections must have a clear understanding

of what has to be achieved so that they do their part in line with the lead aim. As shown in the model in figure 17, some of the elements which need to be aligned are:

Shared values/ Culture

Organizational culture is the share of understanding of employees about how things are done within an organization. Because cultures have an impact on strategy implementation, they have to be aligned with the strategies for any endeavour to be implemented successfully. (Okumus, 2003: p876). Within GDRT, there are several dominant cultures which may affect the adoption of PPP models. Due to the need to avoid delays as a way of reducing unnecessary time related costs during the implementation of a PPP model, the culture of taking time to make approvals or process information will not be ideal. This culture might have embedded itself within GDRT over time through socialisation and lack of proper accountability systems.

Structure

An organizational structure is the shape, division of labour, job duties and responsibilities, the distribution of power and the decision making procedures within the organization. An organizational structure facilitates the implementation of strategy and if not, adjustments will have to be made to make it suitable because structure and strategy have to be aligned.

(Okumus, 2003: p876).

The best structure for implementing the PPP models is a matrix structure. The matrix structure allows all the functions to be coordinated well so that they all contribute well to the goals set. Within GDRT, there will be need to have a coordinated approach

which involves ,among others, the policy makers, the finance people who do the financial plans, the technical people who oversee the projects, the legal people who will give legal guidance and the monitoring and evaluation people who will ensure accountability. The current structure may compromise the adoption of the PPP models because it is too formal and functional. A formalized structure involves rules and procedures which are used to organize activities and people within an organization. Such a structure may be so restrictive and normally because it is functional, it promotes the silo approach to organizational activities. However, an “organic” structure with fewer formal procedures encourages horizontal and vertical communication and flexible roles.

(Burke, 2010: p310).

Systems and processes

Systems and processes are meant to focus resources on the objectives that will reap the biggest reward for organizations. Good systems and processes require a clear sense of the business and cultural priorities, and then aligning the organization to meet measurable goals and engaging people through continuous performance feedback.

(Coon and Wolf, 2005: p19)

If PPP models are to be adopted, there is a great need to have an adjustment to the conventional systems and processes for them to support the new models. A good example is the way the financial plans will be done when implementing a PPP project. Normally a project would be budgeted for the years of implementation, but with a PPP project, the budgets will be committed after the project is completed to the satisfaction of GDRT i.e. during the payback period. The approval systems may also change to avoid

bureaucratic delays since the risk of time costs will be sitting with the private party. As well the methods of roads construction and maintenance will be different from what GDRT normally prescribes because the private sector is allowed to be creative enough to come up with cheaper ways to deliver the product without compromising the end product.

Strategy and purposes

Strategies and the purposes of GDRT are set by its leadership. Ideally their responsibilities must be to guide, encourage and facilitate the pursuit of ends by use of means. With respect to the PPP model, GDRT leadership must have the ability to bring the will of employees into consonance with what has to be achieved so that they can support the idea voluntarily, with enthusiasm and with dedication. They must be able to clearly show that the adoption of the PPP models is significantly more desirable than the continued reliance on MTEF funds.

(Ackoff, 1999: p20)

As GDRT's strategies are set, they need accommodate the alternative model if it is to gain support from the whole department. The information would have to be cascaded to all functions so that they give their support. Because policies are also approved at the strategic level, they must pave the way for the PPP models' successful implementation.

Staff and resources

Most critical to the implementation of PPPs would be the skills to ensure that the projects are successfully implemented. It therefore means that GDRT needs to have staff relevant to the models equipped with the necessary resources. During the contract

negotiations, there is need to have individuals who can identify all the risks involved and apportion them appropriately between the funder, the private implementer and GDRT.

2.6 Resistance to Change

Leaders must harness and sustain energy across the organization to execute their strategies successfully. This is accomplished through high-quality interactions in the form of provision of continuous feedback, engaging people in change, building passion for a common goal and developing leaders at all levels to have the skills to interact effectively with others.

(Coon and Wolf, 2005:p26)

The establishment of a strategic vision will move the company to a new level of performance, energizes people, and provides a new sense of direction and confidence that the company is on the path to great things. If all this is properly done, there will be minimum resistance to new ideas within any entity.

(Coon and Wolf, 2005: p20)

Because the PPP models will be relatively new within the department, there is tremendous need to minimise resistance from all GDRT employees and to ensure that this is achieved a process shown in figure 16 has to be adhered to.

2.6.1 Six-step model of change

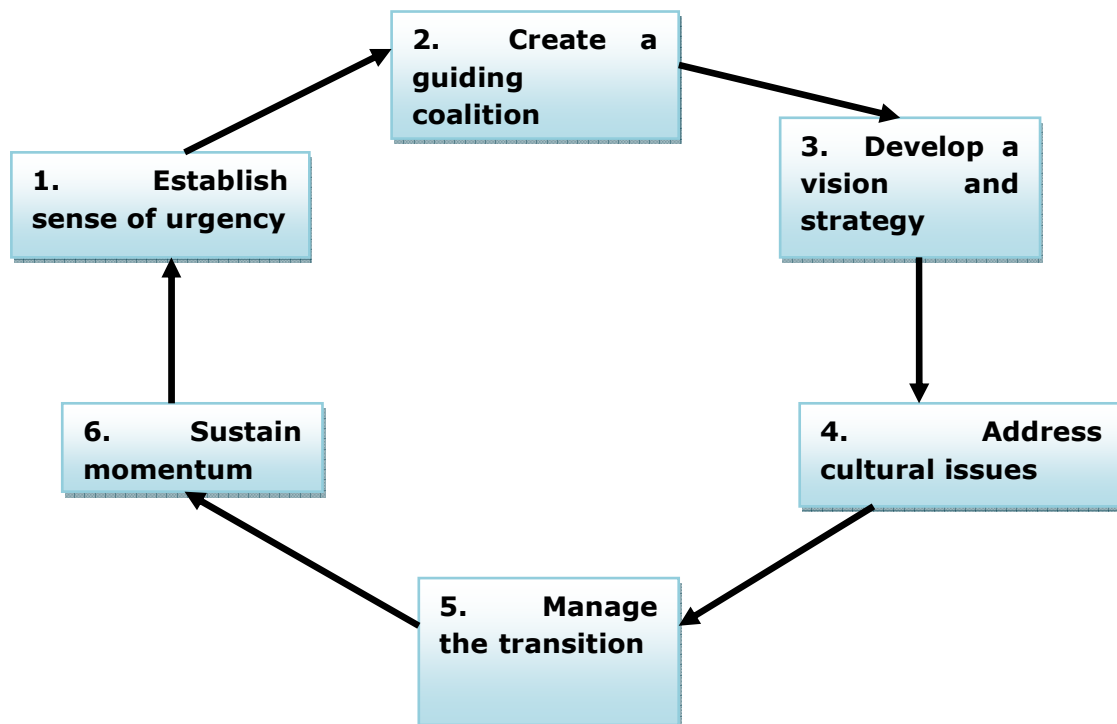


Fig 18.0: Six-step Model of Change (Mabey, 2008: p15)

Establishment of a sense of urgency

In order to gain the support of all the functions and levels within GDRT towards the implementation of PPP models, there is need to make everyone understand the reasoning behind the decision to adopt another funding model. The existing position and its challenges must be clear to all and the projected benefits must also be explained. This will make employees find reason to support the new approach to projects funding.

(Mabey, 2008: p15)

Creation of a guiding coalition

A coalition can only be achieved through proper communication of the intended changes together with their benefits. Once everyone

understands, they can then support the change. The different functions within GDRT will then align their respective sectional strategies and objectives to support the PPP models.

Resistance may be faced from people who benefit from the traditional funding model and it is very critical to win those as well. Some will be so much used to doing things the old way and may prove difficult to convince.

(Mabey, 2008: p21)

Development of a vision and strategy

It is also very critical to develop a vision and strategy which is aligned to the adoption of PPP models before embarking on the change. The vision and strategies formed will give guidance to all GDRT internal parties to work towards the success of the new model. The vision and strategy must be informed by the challenges associated with the current approach and aimed at reaping the benefits of a new approach

(Mabey, 2008: p24)

Addressing of cultural issues

This refers to issues relating to prevailing values and attitudes. It is the norm within any organization that there exist pockets of various cultures. However, to achieve some coalition, there has to be some form of unification attained within GDRT so that the culture adopted supports the PPP models. The preferred change in culture must not be imposed but charismatic leadership will achieve the desired results.

Some of the negative cultures which may need to be dropped are the culture of complacency, the culture of bureaucracy, the culture of corruption and the culture of applying politics where it is not relevant.

(Mabey, 2008: p41)

Transition management

This process is very critical because if it fails employees may backslide and the achieved results may be lost. Support and resources are required for the achieved results to be sustained. Managing the transition may require training which is normally not prioritised within GDRT because of the costs involved.

(Mabey, 2008: p46)

Sustaining of momentum

At this stage the change must have been fully achieved. It will be very important that if the PPP models are finally adopted, the resources and environment within GDRT which supports the models are maintained. The alignment between GDRT's values, strategies, resources, staff strategies, systems and structure which would have been achieved already must be guarded. Challenges may be the disturbances caused by leadership changes which may result in new priorities or even new changes.

(Mabey, 2008: p52)

2.7 Conclusion

A clear understanding of the PPP models which exist and their different characteristics help in the selection of one which suits any government institution. The structure set for the implementation of

PPPs, the external environmental factors, the level of alignment of organizational internal factors with strategies and the level of managing change are critical when adopting PPPs as alternative funding models. Chapter 3 will consider what other authors perceive about factors which determine the successful implementation of PPP programmes.

3 Chapter 3: Literature Review

3.1 Introduction

A number of factors are correlated with the existing road service delivery backlogs which include skills shortage, inappropriate project implementation structure, inappropriate organizational culture, misalignment of policies and other organizational internal elements with strategies, poor change management skills, inadequate funding, ineffective and inefficient roads construction and maintenance methods and political “interference” among others. Public-Private Partnership models, when applied properly, can help service delivery even though some of these elements will still have to be manipulated to create an environment conducive for private participation. Rudolph et al (2001) cited quicker capacity, technical innovation, and efficiency as some of the key benefits brought about by private participation in road infrastructure projects.

(Rudolph et al, 2001:p1)

Alfen et al (2009) presented a typical PPP structure as being made up of three principal parties which are the public entity, the funders and the private entity. All these parties have distinct roles towards the achievement of the service delivery objective.

(Alfen et al, 2009:p22)

In a World Bank (2007) paper on ‘Private Participation in the Road Sector in Brazil’ there is an argument that faster country development pushes up the roads infrastructure demand. The document says that to ensure the transport sector can act as a lever

for economic growth instead of a bottleneck, there is need to look at the participation of the private sector in service delivery.

(World Bank, 2007: p22)

The OECD (2007) document entitled 'Principles for Private Sector Participation in Infrastructure' also supports the argument that the shortage of infrastructure in developing countries is a major obstacle to meeting populations' needs, to promoting enterprise development and to achieving the goals of the Millennium Declaration. It highlights the third world countries plight of facing the double challenge of growing demand and ageing physical assets in large parts of their infrastructure sectors, which could become an obstacle to sustained growth. This includes the roads infrastructure. To clear the backlog, the OECD (2007) document suggests that policy makers need to mobilise all the potential sources of capital and consider innovative schemes for infrastructure financing which include PPPs. The same OECD (2007) document acknowledges the fact that a cost benefit analysis must be carried out before adopting any financing option and if a PPP model is adopted, a sound enabling environment for infrastructure investment must be established to attract the private sector

(OECD, 2007: p9, 12, 15)

From the private sector point of view, the Department of Economic Affairs in India (2006) acknowledged that even though the public sector needs the private sector participation in infrastructure projects, the private sector also benefits because PPPs represent enormous, long-term business opportunities for them. From a research done in India, the success of the PPP projects already implemented has stimulated a lot of interest from the private sector

resulting in great competition and big draw-downs on service delivery backlogs where the PPP models were applied.

(India. Department of Economic Affairs, 2006: p 34)

3.2 PPPs

According to the 'Public-Private Partnerships' document published by the International Monetary Fund (2004), PPPs are attractive to both the government and the private sector. For the government, private financing can support increased infrastructure investment without immediately adding to government borrowing and debt, and can be a source of government revenue. At the same time, better management in the private sector, and its capacity to innovate, can lead to increased efficiency; this in turn should translate into a combination of better quality and lower cost services. For the private sector, PPPs present business opportunities. However, some governments cannot fully adopt the extreme levels of PPPs on some infrastructure projects, which is privatisation, because of the strategic nature of some of them and the social impacts those projects may have. The same IMF publication (2004) acknowledges that PPPs are suited to situations where the government can clearly identify the quality of services it wants the private sector to provide, and can translate these into measurable output indicators. The government can then enter into a contract with the private sector which links service payments to measurable service delivery. IMF (2004) suggests as better PPP contracts which combine the asset creation and operation, because of the defects liabilities the government entity might have to bear if it takes over the operation of the asset. Grout (1997) says this is because the private operator will have clear interest in the quality of an asset, given its influence on the capacity to deliver a service effectively and efficiently. Risks

The adoptions of PPPs relieve the government of a number of risks and transfer them to the private sector. However, Queiroz (2005:p2) pointed out that even if risks are transferred to the private sector, the process of risk sharing must be well managed and confidence must be established in the private party that they can manage the risks they take charge of.

The risks in question according to IMF (2004: p12) are:

- Construction risk: which is related to design problems, building cost overruns, and project delays;
- Financial risk: which is related to variability in interest rates, exchange rates, and other factors affecting financing costs;
- Performance risk: which is related to the availability of an asset, and the continuity and quality of service provision;
- Demand risk: which is related to the on-going need for services; and
- Residual value risk: This is related to the future market price of an asset.

Farquharson, Mästle, Yescombe and Encinas (2011:p39) also emphasised a need for a complete picture of the risks that flow from the project requirements before entering into any agreement.

3.3 Alignment

An IMF (2004:p15) document, 'Public-Private Partnerships', also highlights that there must be institutional frameworks in support of PPP models. Government PPP policies should ensure that the quality of services is contractible; there is adequate risk transfer to the private sector; and there is either competition or incentive-based

regulation. The legal framework also has to be aligned to provide reassurance to the private sector that contracts will be honoured. In some cases this will require changes or additions to existing laws in order to achieve the alignment needed.

(IMF, 2004: p15)

Queiroz (2005: p2) acknowledges the need for an appropriate and stable regulatory and legal framework, and a stable macro-economic environment if PPP models are to be successful.

In the United Nations' (2000) publication entitled, 'Guidelines on Private Public Partnerships for Infrastructure Development', there is emphasis on the need for political buy-in for the success of a PPP engagement in infrastructure. The document made it clear that policy adjustments ranging from the constitutional to the legal, economic and the social considerations will have to be considered for the success of PPPs.

(United Nations, 2000: 37)

According to the World Bank (2009:p14) the Private sector investors always examine the legal framework and its ability to ensure the effectiveness of long-term PPP contracts. It sites a possibility for the need of legislation which will allow a private sector company to charge and collect user fees under a concession or fully private PPP model. The World Bank (2009:p13) reiterates the establishment of a clear policy framework which helps both the public and the private sectors to understand the core rationale for PPPs and how the public sector will go about making them happen.

(World Bank, 2009:p14).

According to Saadé, Bateman and Bendahmane, (2001:p2), for public-private partnerships to work, they must be mutually beneficial and aligned to the overall strategy to deliver needed products and services.

Queiroz (2005:p2) says that it is imperative for individual governments to establish tender procedures which are aligned to what they want to achieve and the conditions which exist internally. Queiroz (2005:p2) also cited that even though unsolicited tender procedures can be applicable in PPP models, governments have distanced themselves from them because of their promotion of corruption. The general experience with unsolicited proposals is often negative, reflecting the fact that projects of this type have usually represented poor value for money, and were frequently incompatible with the actual development needs.

(Queiroz 2005:p2).

Saragiotis (2009:p13) also highlighted as important a transparent and clear tendering and award process operating under a tested legal and regulatory framework for the success of the PPP program. He also suggested that PPP performance has to be linked to an overarching government economic policy at the following levels.

- The strategic level
A strategy links a particular project to the policy and provides the connection between the project's outcomes and the policy objectives.
- The contractual level
The contract itself has its own obligations and defines a specific set of obligations for the concessionaire measured by key performance indicators (KPIs).
- The operational level

At the operational level, tools and processes are developed for day-to-day performance management. Government usually has a contract management administration process to support monitoring at this stage.

(Saragiotis, 2009: p19, 20)

Establishing a clear policy framework helps both the public and the private sectors to understand the core rationale for PPPs and how the public sector will go about making them happen. PPPs are difficult to deliver in an unstable policy environment. When assessing a PPP market, the private sector expects to see a PPP policy that sets out the following:

- The public policy rationale for using PPPs
- The guidelines that the public sector will use to select, prepare, and procure PPP projects in a consistent way
- The determination of who approves what and when throughout the process of project selection, preparation, and procurement
- The process of resolving disputes (often set out in legislation or in sector regulations, but often—in more detail—in the contract itself)
- The arrangements for monitoring the contract after it has been signed.

By way of example, South Africa's Public Finance Management Act regulates and sets out the responsibilities to ensure efficient and effective government financial management. Under this act, Treasury Regulation 16 specifies the required approvals and responsibilities. Detailed guidance, in the form of a PPP manual, has been developed to cover the range of processes involved.

(Farquharson et al, 2011:p15, 16)

Kwazulu-Natal (KZN) local government (2006), in their service delivery model redesign document, acknowledged that public sector needs to establish itself as a business, and needs to understand that fully meeting the needs of its customers is paramount, within the context of national and provincial policies. In support of the creation of an enabling environment argument, KZN (2006) believes that service delivery models and the supporting structures need to reflect less of the traditional bureaucratic and internally operated structures normally associated with government organisations but, instead, should look to the private sector which has adopted "excellence in service" as the mantra for acquiring and holding market share. This implies a need for a culture change as well.

(South Africa. KwaZulu-Natal Department of Works, 2006: 7)

3.4 Politics

An International Monetary Fund (2004, p15) document on 'Public-Private Partnerships' acknowledges that a PPP is a major commitment on the part of the private sector. For security reasons, the private sector needs to know that politicians are committed to private sector involvement. Uncertainty in this regard gives rise to political risks that are not conducive to making long-term business decisions and commitments. At the same time, potential private partners need to know that the government is fair in its dealing with the private sector, and will meet the commitments it makes under PPPs. It is also important to establish clear channels of responsibility and accountability for government involvement in PPPs.

(International Monetary Fund, 2004: p15)

Queiroz (2005: p2) also acknowledges that a strong political will is ideal for the implementation of a PPP model.

The World Bank, (2007: p1) attaches emphasis to the fact that without high-level political support for the PPP Program, all parties will labour in vain.

It is therefore becomes government's responsibility to address political risks; including the concern that governments may come in unilaterally and change the rules (the swing from a positive approach to PPPs to a negative approach and cancellation of PPPs after an election is common in some countries).

(UN, 2008:p38)

The UN (2000) document on 'Guidelines on Private Public Partnerships for Infrastructure Development', highlights the fact that since PPPs may be long period contracts; they may run beyond any political administration/ regime term hence making it difficult for politicians to commit. This then becomes a risk for the private sector, because the new regime may come with a different view of the existing relationship involving the private sector. They may bring in new policies and priorities which do not recognise the existence of the private sector engagements.

(United Nations, 2000: p 37)

3.5 Skills

According to the International Monetary Fund (2004: p15) PPPs require the development of expertise within the governments. This covers the full range of skills required to manage a PPP program. One common complaint about PPPs from the private sector is that bidding and contracting take much longer than in the private sector due to skills shortages and long approval lines.

This argument is reiterated by the World Bank (2007: p33), who admit that PPP procurement requires specialized skills that often are lacking in government, particularly in developing countries. They say that it is common for a government to focus on the need for skills involved in managing a successful transaction. Such skills however, can often be procured through external advisory services. More important are the skills involved in managing the complexity of the public-private interface: understanding how particular PPP projects fit within the governments sector and service delivery objectives, and how the allocation of risks under any particular project fits into the government's overall fiscal strategy.

(World Bank 2007: p33)

The private sector also wants assurance that the operating framework within government is capable of managing the PPP process and those policy makers and the parties implementing projects have a realistic understanding of the complexity of PPP projects. In particular, public procurement authorities often fail to appreciate the significant differences between PPPs and traditional forms of procurement and the implications of these differences for the level of resources, the unique skills, and the new processes and institutions required. Indeed, implementing a PPP program may often lead to fundamental changes in the way a public authority perceives its role and the way it goes about its business.

(World Bank 2009 p16, 17)

Saragiotis, (2009:p11) , puts proud the fact that capacity issues arise for both government and the private sector, mainly referring to skills shortages on the individual and the organizational levels. He

highlights that capacity issues can come into play, especially when the PPP program expands in value or number of projects.

(Saragiotis, 2009:p11)

United Nations (2008: p23) places emphasis on the fact that there are a number of new skills that must be developed for PPPs, such as negotiation, contractual and financial skills. It cites the challenge that instead of the traditional approaches, which focus on inputs, PPPs require skills that can identify the outputs of the projects as well.

(UN, 2008:p23)

3.6 Project Appraisal and Prioritization

For success the government will also have to refine its project appraisal and prioritization. First and foremost, the decision whether to undertake a project, and the choice between traditional public investment and a PPP to implement it, should be based on technically sound value-for-money comparisons. It is particularly important to avoid a possible bias in favour of PPPs simply because they involve private finance, and in some cases generate a revenue stream for the government. The PPP Unit of the National Treasury of South Africa provides detailed guidance and technical assistance to agencies related to the feasibility and management of PPPs. In Chile, project evaluation and prioritization involves a number of interested ministries and government agencies, including the Ministry of Finance which ensures that the future fiscal implications of PPPs are consistent with medium-term debt sustainability. More generally, PPPs should not complicate fiscal management, an objective which places a premium on proper accounting and reporting.

(IMF, 2004: p18)

Queiroz (2005:p2) also emphasised the need for a robust economic and financial appraisal of the project that asks, and endeavours to answer, three questions: is the project beneficial for society, is it commercially viable for the potential concessionaire, and is the required public sector contribution justified in terms of the additional benefits engendered by that contribution?

3.7 Social Impacts

As contained within an International Monetary Fund document (2004: p31), the social and environmental impacts of PPP must be investigated before implementation.

Queiroz (2005:p6) proposes the need for social participation before adopting a PPP model while the World Bank (2009: p30) states that private sector participation can be limited due to the social and political sensitivities of projects.

While Saragiotis, (2009:p53), states that there is an optimum balance between the socioeconomic rates of return that accrue to the government and the projected financial return of the investor, the United Nations (2008:p20) cites that a PPP project must be one for which there is plainly a social and economic need, while its delivery is recognized as important to most political opinions. The UN (2008:p87) emphasises that the PPP models assessment process should put people first by increasing accountability and transparency in projects and improving the quality of life, especially of the socially and economically disadvantaged.

3.8 Culture

According to the World Bank (2007:p1), ineffective governments tend to have ineffective PPP Units. Where government agencies have a culture of being corrupt and uncoordinated it will be difficult for that government to implement a successful PPP programme

Saragiotis,(2009:p33) suggested an alignment of organizational “development mission” with the private sector culture and the shifting of resources towards risk mitigation and capacity building while realigning incentives and performance metrics with goals for a successful PPP project.

(Saragiotis, 2009:p33)

The UN, (2008:p13) say that good governance is important when implementing PPP projects and it defines governance as referring to the processes in government actions and how things are done, not just what is done. The document says that governance covers the quality of institutions and their effectiveness in translating policy into successful implementation and that institutions are in general understood to be the bodies setting formal rules (property rights, rule of law etc.) while taking into account informal constraints (beliefs, traditions and social norms) that shape human interactions.

(UN, 2008:p13)

3.9 Structure

The World Bank, (2007: p1), alluded to the fact that PPP project managers with executive power tend to be more effective than

those that are purely advisory. It stipulates that their power should be coupled with a mandate to promote and facilitate good PPPs.

(World Bank (2007: p1)

In many governments, individual sections operate within "silos/' with little information sharing or cooperation with other agencies. Sometimes the silos are reinforced through competition between political figures in charge of those sections. The silos may also derive from the institutional history, from inappropriate legislation, or from the tradition of secrecy within the government. In a silo situation, agencies with related functions may not be able to coordinate their activities sufficiently to make PPPs happen. In cases where policy making and implementation are poorly integrated for example, it is tempting to create a new agency to cut through the lack of integration, and to provide overarching guidance and control. A PPP unit is a good example.

(World Bank, 2007 p33 , 34)

Saragiotis,(2009:p2) also said that success and efficiency largely depend on the adaptability of the institutional structure of the PPP to the peculiarities of the host government. He suggested that ultimately, the formation, function, and structure of the PPP implementation team should be determined by the needs of the host jurisdiction. He also emphasised the importance of a clear allocation of responsibilities within governmental agencies and line ministries for dealing with PPPs in order to achieve the best results.

(Saragiotis, 2009:p2, 27)

3.10 Funding

The World Bank, (2007: p23), states that governments must embark on PPP only when they are sure that they can manage the repayments. The consequences of pushing commitments off budget are reduced incentives and ability to control costs and the risk that the government will accumulate more liabilities than it can manage.

(World Bank, 2007:p23)

Another World Bank document, (2009:p14), also cites that the private sector wants to be sure that the public sector have a robust, forward-planning program and allocation process which allows payments to be made when due, such as obligations against future budgets before committing.

Saragiotis, (2009:p24) developed the following points as ingredients for a successful implementation of PPPs:

- PPP projects must be integrated within government's investment strategy, medium term fiscal framework, and the budget cycle; and
- PPPs must be pursued only if they create value for money when compared with standard public procurement methods.
- PPPs must be able to leverage governments' ability to develop necessary infrastructure, without creating unrealistic long-term fiscal commitments.
- PPPs need to be embedded in the budget framework to manage investments and related risks.

Saragiotis,(2009:p27) commented that PPPs need to be integrated within the government investment strategy as a potential financial structure that, under certain circumstances, may substitute successfully for the traditional public procurement schemes. In this context, PPPs should be part of a regular cycle of investment projects in the medium term fiscal framework to ensure fiscal capacity in the budget.

(Saragiotis, 2009:p27)

The issue of government affordability was emphasised by Farquharson et al, (2011:p38) who said that for availability-based PPPs, where the public authority, not the user, makes the payments, assessment of affordability is one of the most important aspects in considering the deliverability of the project. These long term payment obligations may present challenges for government (as well as investors), which in turn affect both the scope and level of services in the project design.

Saragiotis, (2009:p11) also goes on to say that knowing how to manage PPP fiscal risks means that the Ministry of Finance should have a central role in managing PPPs. His other opinion is that regardless of the size of the program, there is a need for the establishment of a framework to manage long term PPP liabilities and in addition, the government needs to develop capacity to manage and assess risks related to these liabilities.

(Saragiotis, 2009:p27)

3.11 External Environment

According to Saragiotis, (2009:p13) both informal and formal market engagements are important for the smooth running of a PPP program

(Saragiotis, 2009:p13)

A UN publication (2008:p60) sets out that it makes sense for Governments to consult the key stakeholders on policy. An early and consistent involvement can manage the fear of change and the unknown by providing an open, transparent process. Furthermore, by bringing in end-users and those involved in providing the service, their objectives, needs, and concerns can be identified and addressed in the PPP model.

(UN, 2008:p60)

Saragiotis,(2009:p53) acknowledges that a robust economic environment includes policies that foster macroeconomic stability, encourage investment, and inspire political consensus. He says failure to address the above will lead to a significant deterrent to the development of an attractive PPP program and will also lead to reduced foreign investment in infrastructure.

(Saragiotis, 2009:p53)

3.12 Change

Farquharson et al (2011:p23) states that implementing a PPP program may often lead to fundamental changes in the way a public authority perceives its role and the way it goes about its business. Saragiotis,(2009:p64) follows up by saying the government institution's change management capabilities play a major role in changing people's mind sets about the PPP models.

A UN (2008:p19) document alludes to the fact that PPP policies should be open to change as mistakes will inevitably be made and refinements are continuously needed.

(UN, 2008:p19)

3.13 Conclusion

Based on the existing literature about the application of Public Private Partnerships, it's clear that a number of factors contribute to successful adoption of PPP models as alternative funding sources. Pointers are that, unless these factors are considered and adjusted to make the environment conducive and attractive for all parties involved, failure will be a definite outcome. These factors will be the guide in deciding the type of data to be collected, the analysis required and the research tool to be applied as captured in Chapter 4.

4 Chapter 4: Research Design/Research Methodology

4.1 Introduction

A research design provides the glue that holds the research project together. It is used to structure the research, to show how all of the major parts of the research project work together to try to address the central research question. These parts of a research project include the sample of groups, measures, treatments or programmes and methods.

(Coldwel and Herbst, 2004:p35).

4.2 Research Designs

Cooper and Schindler(2001) (as cited by Coldwel and Herbst, 2004:p36), acknowledge that the common views about research designs are that they are time based plans, they are based on research questions, they guide the selection of sources and types of information and that they offer a framework for specifying the relationships.

(Coldwel and Herbst, 2004:p36)

If properly drafted, research designs give ideas on the techniques which will be used to gather the data, the kind of sampling that will be used and how the time and cost constraints will be dealt with.

(Coldwel and Herbst, 2004:p36)

A research design is the strategy for the study and the plan by which the strategy is to be carried out. This means it will specify the methods and procedures for the collection, measurement and

analysis of data. The method selected must aid in responding to the research questions and help in achieving the research objectives.

(Coldwel and Herbst, 2004:p36)

Good research designs must have the following characteristics:

- Experimental in nature

A good research design must be an experimental design or must bear a close resemblance to it. The further away the research design moves from being experimental, the more difficult it is to accept the validity of the findings.

- Feasible

Good designs must be implementable. The sequence and timing of events must be carefully thought out. Potential problems in measurement, adherence to assignment, database construction and the like must be anticipated and, where needed, additional groups or measurements are included in the design to explicitly correct such problems.

- Flexible

Good research designs must have flexibility built into them. Often, this flexibility results from duplication of essential design features. For example, multiple replications of a treatment help to ensure that failure to implement the treatment in one setting will not invalidate the entire study. Another example of a flexible design is one which allows for different methods to be applied. A research can be done both qualitatively and quantitatively or both approaches can be made use of. This improves the authenticity of the results because it also allows for

methodological triangulation which is triangulation achieved by the use of different methods for the same research.

- Efficient

A good research design utilises resources efficiently by striking a balance between minimising/ eliminating internal threats to validity and the cost of research. Where possible, the least costly strategies for ruling out potential threats to validity are utilised.

(Coldwel and Herbst, 2004:p38)

Research designs can be classified into three; hence the threefold classification of research designs shown in figure 19. The three classes are randomised or true experiment, the quasi experiment and the non-experiment. The randomised design is the one adopted for this research because a sample will be chosen which represents the bigger population within GDRT employees who frequently deal with projects.

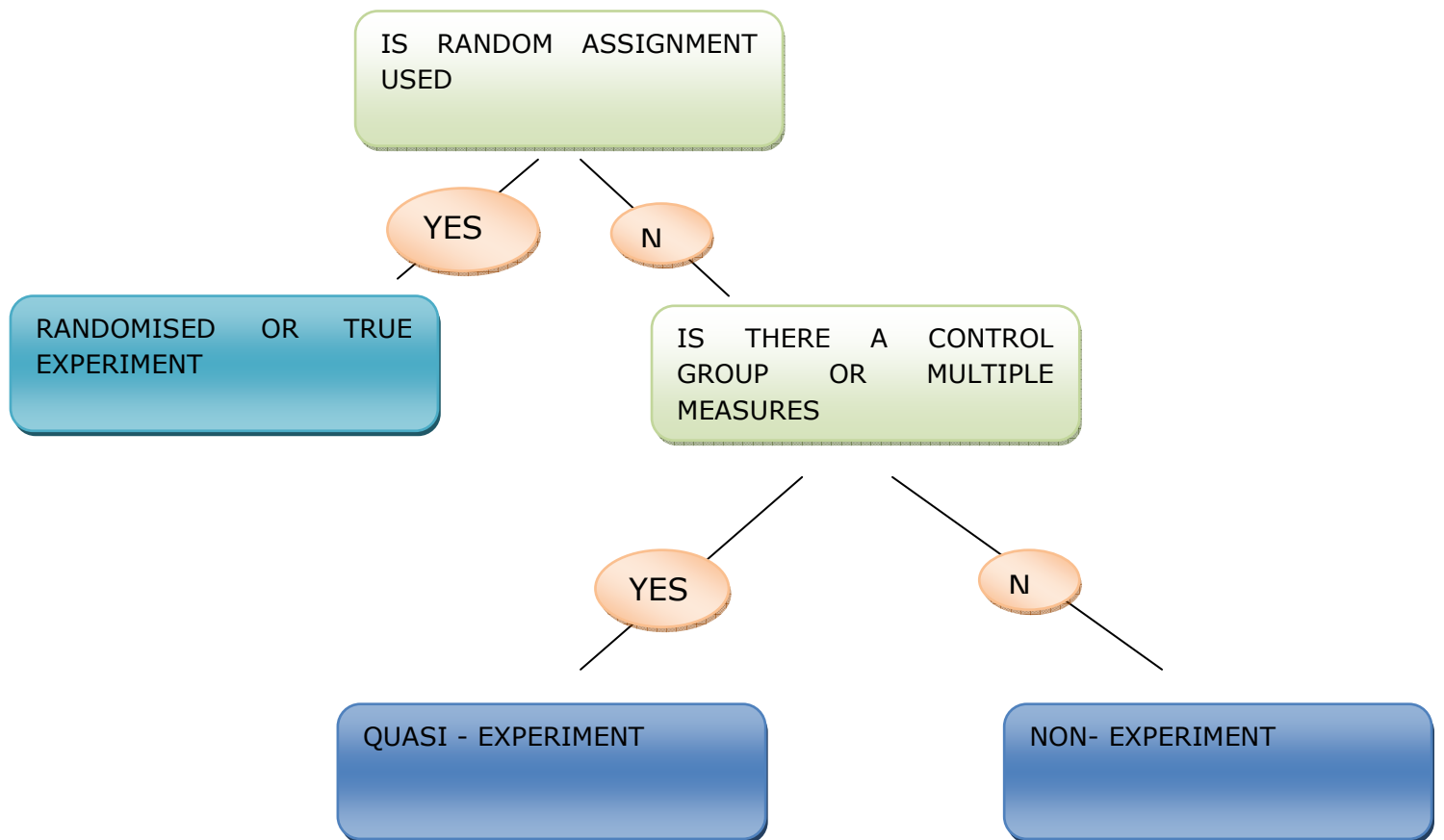


Fig 19: Threefold classification of research designs (Coldwell and Herbst, 2004: p39)

A number of research designs exist but the most common ones are:

- Extended literature reviews
- Survey based research
- Case studies
- Correlation-based research
- Comparative analysis
- Content analysis
- Critical theories
- Historical studies
- Evaluative research
- Ethnographic research

- Action research
- Experiments
- Secondary data analysis
- Simulations
- Interdisciplinary research
- Theory development

(Hofstee, 2006: p122)

For this research both the survey based and secondary data analysis research designs will be adopted. This is because of their applicability to the research questions, the objectives and the data which is required for the analysis. Questionnaires will be used for the survey and existing reports and data within GDRT will be used to for the secondary data analysis.

4.3 Research Approaches

The choice of approach to use is of paramount importance if a research project has to be successful. It contributes largely to the quality of a research project. Researches can be qualitative or quantitative in nature depending on the nature of research being carried out and the type of data being collected during the inquiry. In both approaches, relevant tools of research must be applied to gather the data.

4.3.1 Qualitative approach

This refers to a research whose findings are not subjected to formal quantification or any quantitative analysis. A qualitative research cannot be analysed by means of mathematical techniques. This might be because an incident does not take place often enough to allow reliable data to be collected. It is the best way to obtain

information about behaviour, feelings, attitudes and other characteristics of people and may be less costly but major business decisions must not be made based on them.

One disadvantage of the qualitative approach is that people are not always willing to answer questions as they might feel that it is an invasion of their privacy or because they are embarrassed or cannot verbalise what they feel ((Tull and Hawkins, 1993) as cited by Coldwell and Herbst, 2004: p14). In such cases, other methods of qualitative approaches are used to surmount the problems, namely *projective techniques and depth interviews*. These two are used when direct questioning is not practical, is not economical and is a less precise way for the researcher to obtain data.

The projective technique assumes that when people are directly questioned, they do not express their real feelings because of a number of reasons. Projective techniques include word associations, sentence completions and third person commentaries and the *Thematic Appreciation Test* (TAT). In the sentence completion, the respondent is given an incomplete sentence and is asked to complete the sentence with the first word that comes to mind. In the third person technique, the respondent is asked why another person does what he does or how he feels or thinks about a particular person. A TAT approach involves showing pictures to respondents and then asking them to provide description of the pictures.

(Coldwell and Herbst, 2004: p13-15)

For this research, a qualitative approach will be used. This is because of the fact that PPP projects have not been applied enough within GDRT to give adequate data to warrant a statistical analysis. Through the questionnaire, GDRT employees' opinions would be established. Due to the sensitivities associated with some of the

questions, the researcher guaranteed anonymity to all respondents so that they can give their honest opinions on the research questions without fear of being known.

4.3.2 Quantitative approach

This involves the collection of primary data from large numbers of individual units, frequently with intentions to project the results to a wider population ((Martins et al, 1996) as cited by Coldwell and Herbst, 2004: p15). The collection of numbers and their classification together with other facts and opinions provide data and this data becomes information when it reaches the user and the user uses it to solve problems. One advantage of quantitative approaches is that they use numbers which are easily understood

(Coldwell and Herbst, 2004: p15)

This approach never features in this research due to inadequate quantitative data to carry out an analysis.

Table 6.0 contains the characteristics of both the qualitative and the quantitative approaches to research.

Qualitative	Quantitative
The aim is a complete, detailed description.	The aim is to classify features, count them, and construct statistical models in an attempt to explain what is observed.
Researcher may only know roughly in advance what he/she is looking for.	Researcher knows clearly in advance what he/she is looking for.
Recommended during earlier phases of research projects.	Recommended during latter phases of research projects.
The design emerges as the study unfolds.	All aspects of the study are carefully designed before data is collected.
Researcher is the data gathering instrument.	Researcher uses tools, such as questionnaires or equipment to collect numerical data.
Data is in the form of words, pictures or objects.	Data is in the form of numbers and statistics.
Subjective - individuals' interpretation of events is important ,e.g., uses participant observation, in-depth interviews etc.	Objective - seeks precise measurement & analysis of target concepts, e.g., uses surveys, questionnaires etc.
Qualitative data is more 'rich', time consuming, and less able to be generalized.	Quantitative data is more efficient, able to test hypotheses, but may miss contextual detail.
Researcher tends to become subjectively immersed in the subject matter.	Researcher tends to remain objectively separated from the subject matter.

Table 6.0: Key features of qualitative and quantitative research
(Neill, 2007)

4.4 Survey Based Research

Surveys are an excellent way of finding out people's opinions, desires and attitudes. They can also be applied to elicit factual information. These designs strive to elicit information from a limited number of individuals who are presumed to have the information being sought. The chosen people are those willing to communicate and who represent the larger group (sample) (Hofstee, 2006: p122). For this study, a group of people who are in contact with road construction and maintenance projects will be chosen because of their understanding of the current funding model, its successes and its failures. They would also have an understanding of the PPP models which exist hence their responses would be more informed.

4.5 Research Tools

Research tools are not a "one size fits all". Their applicability depends so much on the goal or objective to be achieved ,the nature of research being undertaken, resources available, time available for the research, willingness of respondents to cooperate and the relevance of existing literature and existing projects to the current inquiry. A good choice of research tools to use makes a research project easier to execute and improves the quality of data obtained.

Data can be collected using various means some of which are interviews, observations, audio and video tapping, existing documents and questionnaires. No one method is exclusive to either qualitative or quantitative approaches. The collected data can be regarded as either primary or secondary. Primary data is that which involve interaction directly with the respondents and collected for the first time. Secondary data is that which is obtained from existing

documents. The questionnaire in this study will solicit for primary data while the documents and data used for the secondary approach can be regarded as secondary data because it exists and was gathered by someone else.

(Charlesworth, 2003: p22 - 24)

4.5.1 Questionnaires

For this research, a questionnaire survey will be used and caution will be taken to ensure that the only relevant questions are chosen, that the questions are well structured, that the sample is representative of the target population and that the questions are ethical. Questionnaires are a form of structured interviewing where all respondents are asked the same questions and are often given the same options in answering them. Questionnaires may include open questions which respondents answer in their own words. It is however advisable to avoid such questions because people differ in their willingness to write answers and the analysis and interpretation of open question answers is also difficult. However, open questions can also give respondents an opportunity to express themselves in their own words. For this research, open questions will be avoided due to the difficulties associated with the analysis.

Questionnaires may also have the disadvantages of not allowing the researcher to interact or observe the respondents. They are limited in the depth to which the researcher is able to probe any particular respondent and do not allow for digression from the set format. Advantages of questionnaires are that they offer confidentiality to respondents and are generally easier to analyse and turn into quantitative results. They also allow for more volume in terms of people the questionnaires can be sent to.

Questionnaires must be attractively designed and must include information about why the respondent should answer the purpose of the questionnaire, name and contact details of the researcher and information of how it is to be returned when filled in.

The questions contained in a questionnaire must be as short as possible, understandable, neutral and not suggestive for best responses. The questions must be grouped in a way that the easier and general ones are on top and the difficult and specific ones are at the bottom. It is wise to create comfort for the respondent by putting all personal, controversial and discomfiting questions at the bottom. Piloting the questionnaire may help identify glitches in advance. It is also advisable to put a 'don't know' or a 'no opinion' option and avoid middle choices on the responses as much as possible.

(Hofstee, 2006: p132 - 134)

For this research, controversial questions will be avoided as much as possible because of the sensitivities involved. Effort will be made to ensure that the respondents can be willing to participate in the survey. This will be achieved by crafting questions which make them comfortable to answer without being put off or feeling uncomfortable. The presentation of the questionnaire itself will be designed to catch the respondents' attention without compromising its purpose.

The choice to use questionnaires was mainly informed by the need to have people's opinions on the same questions asked and based on dominant responses, have an idea of what the situation is like within GDRT in relation to adoption of PPP models. To put respondents at peace, approval was obtained to carry the research within GDRT before the questionnaire was sent out. Effort was put

to make the questions as objective and clear as possible so that the respondents do not get offended and understand the questions well.

4.5.2 Secondary data analysis

This design uses data which already exists. The data can either be quantitative or qualitative but it is important that the data is reliable and is really applicable to the subject in question.

(Hofstee, 2006: p128)

To establish funding trends within GDRT, existing data and reports will be used. These will be reliable because they are contained in documents verified and endorsed by GDRT's principal accounting officer, the HOD.

4.6 Research Data Validity

There are two forms of validity namely, internal and external validity:

4.6.1 Internal validity

Internal validity is whether the research and data obtained from the research can really be attributed to the specific subject under investigation and the hypothesis proposed (Coldwell and Herbst, 2004:p40). Thus, internal validity is only relevant in studies that try to establish a causal relationship. It's not relevant in most observational or descriptive studies.

The threats to internal validity are:

- Maturation

This causes change within the respondents or subjects.

- Testing effects

Subjects become aware of the nature of the study when given a pre-test, and become more familiar with the test and its intended purpose during the post-testing process

- Selection

The selection effect is a sample bias resulting in differential selection of respondents for the comparison group

- Mortality

Respondents drop out of the control or treatment groups. This problem increases over time and may contribute to sample error.

(Coldwell and Herbst, 2004, p: 40)

4.6.2 External validity

This refers to quality of being able to generalise beyond the data of the experiment to other situations. An example is a study done in one organization and is generalised for other similar organizations and it becomes applicable. The idea of choosing the ideal sample based on the population under investigation applies because whatever result is obtained, it will be generalised for the population identified. This approach is called the *sampling model*.

The threat to external validity is the possibility of wrong generalization. This means that you might assume that the sample chosen represent well the bigger population but overlook things like

time of experiment, the place and the types of people used for the study.

To improve external validity, a good job has to be done to draw a very representative sample from a population. Ensuring that participants participate fully in the study and that drop outs are low can also improve external validity. An effective use of the *proximal similarity model* would also help to improve external validity.

(Coldwell and Herbst, 2004:p41, 42)

To ensure both internal and external validity, the sample chosen was made up of individuals willing to participate in the survey without being pushed. The respondents were randomly chosen but with measures to ensure that only those who understand the subject matter are included. This was solely to avoid responses not informed by what is actually transpiring within GDRT with regards to projects and their funding.

4.7 Sampling

A sample provides a finite part of a statistical population whose properties are studied to gain information about the whole (Webster, 1985 as cited by (Coldwell and Herbst, 2004: p74)). When dealing with people; a sample is defined as a set of respondents selected from a larger population for the purpose of the survey. The population is a group of individual persons, objects or items from which the samples are taken for measurement.

(Coldwell and Herbst, 2004: p74)

Sampling itself is a process, act or technique of selecting representative part of population for purposes of determining parameters or characteristics of the whole population. Sampling is

done to draw conclusions about a population and they are economic, information is obtained quickly and it allows the researcher to deal with a small portion of the population instead of the whole of it.

(Coldwell and Herbst, 2004: p75)

Sampling may have errors which make the sample not so representative of the population from which it is drawn. Sampling error may be caused by chance where, not deliberately though, a sample with common characteristics is chosen and by bias where the selection of a particular sample with certain characteristics is done deliberately.

Sampling errors can be regarded as:

- non-sampling if the error is a result of the manner in which the observations are made,
- Biased communications which is reflected in the way responses are elicited, the social desirability of the people being surveyed, the purpose of the study and the personal biases of the interviews or questionnaire producer. Induced biases where the personal prejudices of either the designer of the study or the collector of the data may tend to induce bias

(Coldwell and Herbst, 2004: p75)

To avoid these errors, contact with respondents will be minimised unless clarity on the questionnaire is being sought. This is to avoid the tendency to influence how the respondents will answer the questions.

Two primary kinds of samples exists which are probability and non-probability samples.

- Probability sample is based on the principle that every unit in the sampling frame has known chance, but not necessarily an

equal chance, of being selected. The advantage of this sample is that it is unbiased and representative of the population. This will be adopted for this research so that the results can be with minimum errors. If errors exist, it will be easier to pick them up.

- Non probability sample is selected using expertise judgement (or the lack of it thereof) of an investigator. With this approach, it is difficult to assess sampling errors and whether the sample is representative of the specific population or not.

(Coldwell and Herbst, 2004: p79)

The degree of precision in any set of sample survey results is a function of the sample size and the methods by which it is obtained. Sample size matters because if it is too small, even if it is randomly selected, it will not relate reliably enough back to its population to enable the researcher to say anything useful about that population. To determine the sample size the following factors are considered:

- Whether the population is finite or not
- The precision of the estimates one wishes to achieve
- The confidence one needs to have in the findings being accurate or correct
- The number of variables that have to be examined simultaneously
- The level of heterogeneity of the population

(Coldwell and Herbst, 2004: p 80)

For this research, the sample to be chosen must represent well the opinions of the population directly involved with projects within GDRT. Because the employees directly in contact with construction and maintenance projects are only 30, the researcher would target all the 30 employees to make up the sample. Among the 30, some

will probably receive questionnaires but not respond. However, at least 25 responses would be regarded as adequate for the analysis. Once the questionnaires are sent out, the researcher will have minimum contact with the respondents to ensure that there is no bias in the responses obtained. However, clarifications about the questions will be offered to the respondents who would come forth.

4.8 Data Analysis

Data analysis is meant to generate meaning from the collected raw data. The choice of the appropriate method for analysis depends on a number of considerations which include the survey design, the sample being surveyed and the type of data being collected.

(Coldwell and Herbst, 2004: p 91 and 93)

Plummer (1983) suggests that the two broad areas to consider in analysis are the quality of data gathered and the move from conceptualisation to theorisation. Validity is critical in analysis and the path to conclusions should be very clear.

(Charlesworth et al, 2003: p5)

There are two approaches to analysis namely quantitative and qualitative. The qualitative approach refers to an analysis based on findings that are not subjected to formal quantification while a quantitative approach to analysis refers to an analysis of primary data collected from large numbers of individual units, frequently with intentions to project the results to a wider population.

(Coldwell and Herbst, 2004: p13 to 15)

For this research, a qualitative analysis will be adopted because it emphasises the perspectives of the individuals who are being surveyed. This is deemed a better approach for this research because the researcher is seeking to elicit what the interpretations of the individuals surveyed are, about GDRT environment in relation to the applicability of PPPs within it. Due to inadequate data to warrant a statistical analysis, a quantitative approach cannot be adopted.

((Bryman, 1989:P25-5) as cited by Charlesworth et al, 2003: p23)

Computer spread sheets will be used to generate graphs which will show the distribution of individuals supporting or disagreeing with a certain perception posed in the questionnaire and based on the individual perceptions, indicative conclusions will be drawn.

4.9 Research Ethics

All the three parties involved in a research project have rights and obligations stipulated by the ethics of research and unless these are followed, the success of a research project will be compromised. Ethics are made up of norms or standards of behaviour that guide normal choices about behaviour and relationships among people.

(Coldwell and Herbst, 2004: p18)

Rights and obligations of the researcher

- The purpose of the research business
The sole purpose of the research should be scientific description and explanation of business phenomena
- Distortion of research findings

Research results must not be distorted and the importance of the findings must not be inflated

- Confidentiality

The privacy and anonymity of the respondents must be preserved. If information about the organization within which the research is being carried out is private, it must be treated thus.

- Disclosure of defective information or erroneous conclusions

The researcher must disclose results that are consistent with the available data. He/she must not manipulate his/her understanding or research methods and techniques to blind his audience by using complex statistical analysis or technical jargon.

Rights and obligations of the respondent

- The obligation to be honest

The honest co-operation of the respondents is crucial since they are the source of the information. This can be achieved by ensuring that consent is sought before a respondent provides information

- Concealment

The researcher must make clear to the respondent the purpose of the research

(Coldwell and Herbst, 2004: p19, 20)

4.10 Conclusion

This Chapter captures the research design and methodology and all the data collected using the tools alluded to in this chapter will be used in the analysis done in the next chapter (Chapter 5).

5 Chapter 5: Results and Discussion

5.1 Introduction

This chapter contains the analysis of the primary data obtained through the application of the questionnaire in appendix 1.0 and secondary data obtained within GDRT. It contains the results obtained to satisfy each of the research objectives which are:

- To ascertain if there is alignment between existing legislation and policies with the strategy to adopt PPPs as alternative funding models within GDRT
- To establish if the existing allocation trends allow for the adoption of PPPs
- To review the suitability of GDRT's internal environmental elements to the adoption of PPP models
- To establish the impact of politics on the adoption of PPP models within GDRT

5.2 Demographics

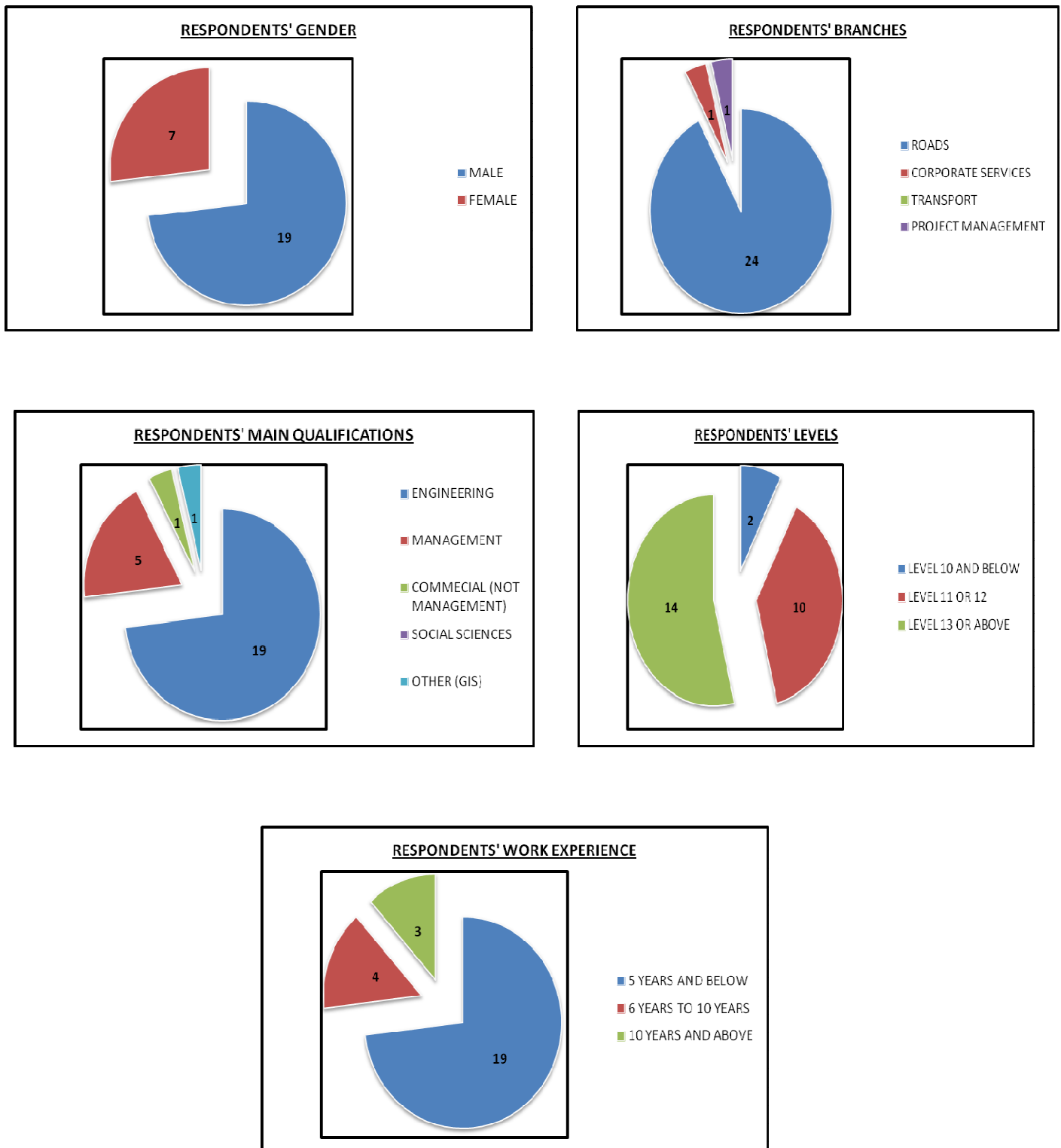


Fig 20: Demographic results

The results for the demographics show that a total of 26 people responded to the questionnaire out of the 30 questionnaires sent out. This shows an 86.67% response rate and the researcher deemed this adequate for the purposes of the research. The focus was on the roads branch employees in direct contact with projects because they understand better the dynamics surrounding all construction and maintenance projects. Of those who responded, 19 (73%) were male and only 7 (26%) were female. This may be a reflection of the proportion of men to women directly involved with road construction and maintenance projects.

The higher number of engineer respondents (19 or 73%) probably shows that there are more engineers within the Roads Branch especially considering the fact that its main functions are predominantly engineering related. It may also be a reflection of the fact that engineers appreciate and understand more the relevance and details of the study due to their continuous contact with the projects. However, it is worth noting that there are no qualified project managers within the roads branch. This may be a concern if PPPs are to be adopted because of their complex nature.

In terms of remuneration levels, most respondents (24 or 92%) are on levels 11 or above. This is predominantly due to the fact that in 2009, engineers were recruited to run GDRT's projects and were given attractive packages in an attempt to retain them. That is the reason why the majority of the respondents (19 or 73%) also have 5 years or less of experience. The 3 respondents with more than 10 years' experience maybe a reflection that there has been massive brain drain within GDRT at some point. This may be a warning that more effort should be put to retain skilled and experienced personnel who are capable of managing the projects implemented by GDRT.

5.3 Results per Objective, Responses to Individual Questions, Summaries per Objective, Discussions and Integration

5.3.1 Results for objective 1

To ascertain if there is alignment between existing legislation and policies with the strategy to adopt PPPs as alternative funding models within GDRT

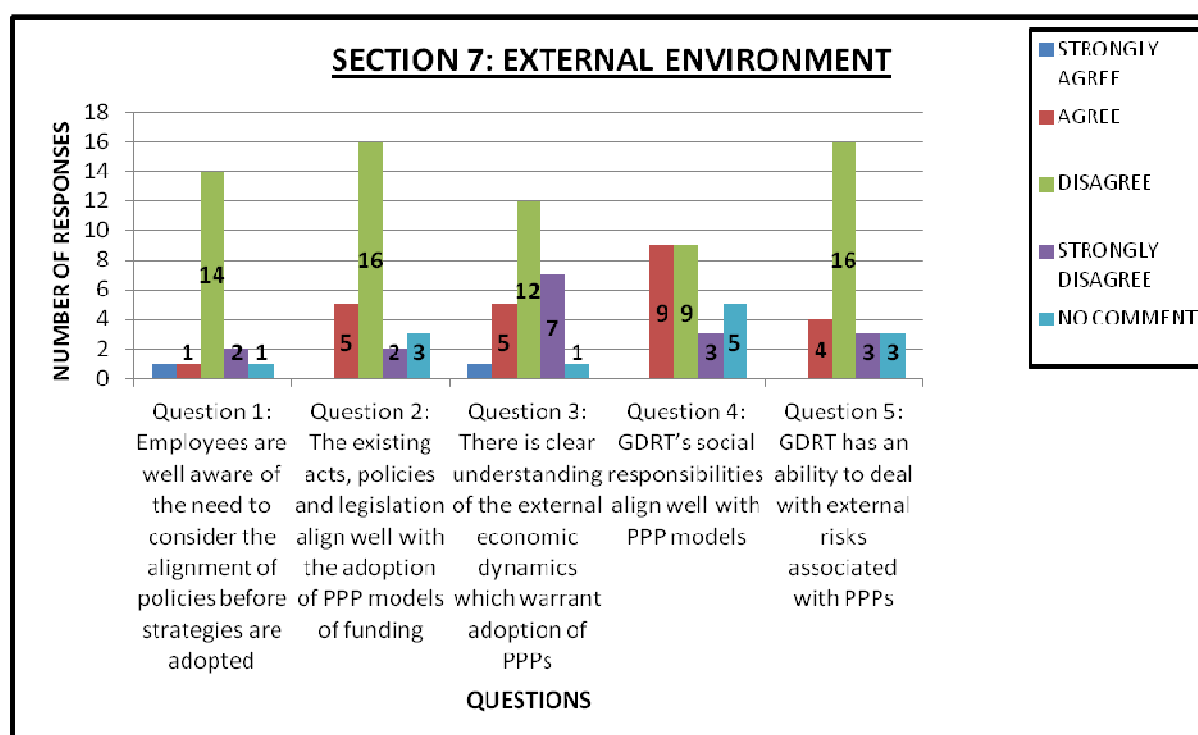


Fig 21: Objective 1 results

Response to question 1 of section 7:

The results show that 61% (14+2) of the respondents do not believe that employees appreciate the need for aligning policies with strategies before they can be adopted. This may mean that the policy section of GDRT is not doing enough to explain the role of policies in the core business of GDRT. Unfortunately, the

interpretation may be that even if PPPs are to be adopted, the championing teams may not even have an appreciation of the need to pay attention to the existing policies to establish if they align well with the strategy.

Response to question 2 of section 7:

The results show that 69% (16+2) of respondents believe that there are no policies and legislation governing GDRT which are directly aligned to the adoption of PPPs. This could be because PPP models are not well understood within GDRT to the extent that employees don't even appreciate the importance to align policies and legislation with them in order to achieve best results. With better understanding of the PPP models, employees would easily push for policies which buttress the adoption of PPPs and in extreme cases they may even motivate for alterations to legislation.

Response to question 3 of section 7:

The results show that 73% (12+7) of the respondents lack the understanding of the external economic dynamics which warrant the adoption of PPPs as alternative funding. This could be because of the lack of knowledge about what warrants the adoption of PPP models or just the culture of being ignorant to facts.

Response to question 4 of section 7:

The results show that the number of respondents who believe that GDRT's social responsibilities align well with PPP models almost equal those who believe otherwise. This could be a reflection that PPP models can align well with some of the existing social responsibilities but misalign with some.

Response to question 5 of section 7:

The results reflect that 73% (16+3) of the employees believe that GDRT does not have the capacity to deal with risks which may emanate from PPP engagements. This may be due to lack of skills to manage risks or some internal dynamics which may be prohibiting.

5.3.1.1 Summary of results for objective 1

The dominant perceptions among respondents were that:

- There is poor appreciation of the need to align policies and legislation to suit the adoption of PPPs.
- No adequate policies and legislation which support PPPs exist within GDRT.
- There is a poor appreciation of the external economic dynamics which justify the adoption of PPPs
- There is a deficiency of skills to manage external risks associated with the adoption of PPPs.

5.3.1.2 Objective 1: Discussion and integration

According to IMF (2004:p15) there must be institutional frameworks in support of PPP models. This framework includes policies and legislation which has to be aligned to provide reassurance to the private sector that contracts will be honoured. In some cases this will require changes or additions to existing laws in order to achieve the alignment needed. However because the results show that within GDRT there is poor appreciation of the need to align policies and legislation to suit the adoption of PPPs, it would probably be challenging to even start to align the legislation and policies in support of PPP models. The World Bank (2009:p14) also

emphasised that the private sector looks at the legislation which governs PPPs before engaging with any public entity. This is reiterated by Farquharson et al, (2011:p15, 16) who argued that a clear policy framework helps both the public and the private sectors to understand the core rationale for PPPs and how the public sector will go about making them happen. Unfortunately the results portray that there are no adequate policies and legislation which support PPPs within GDRT. This may pose a challenge if GDRT is to adopt the PPP funding models.

The OECD (2007) document acknowledges that a cost benefit analysis must be carried out before adopting any alternative financing option. OECD (2007) continues to say that if a PPP model is adopted, a sound enabling environment for infrastructure investment must be established to attract the private sector. To carry out the analysis referred to and to ensure that the environment becomes conducive for PPP implementation, there is need to understand a lot of the external dynamics. The economic situation and financial implications are major elements in the cost benefit analysis. If, as the results show, there is a poor appreciation of the external economic dynamics which justify the adoption of PPPs, it will be very difficult for government entities to motivate for the adoption of PPPs. Buy-in from political leadership will probably not be guaranteed because they will also be seeking justification for the adoption of PPPs instead of continuing with the traditional funding models.

According to Farquharson et al (2011:p39) there is a great need for a complete picture of the risks that flow from the project requirements before entering into a PPP agreement. Because the research results show that there is a deficiency of skills to identify

and manage external risks associated with the adoption of PPPs, the chances are that GDRT may end up with unnecessary liabilities if they get into agreements with the private sector blindly. The adoption of PPP models is predominantly about the transfer of risks to the private sector, especially the financial risks.

5.3.2 Results for objective 2

To establish if the existing allocation trends allow for the adoption of PPPs

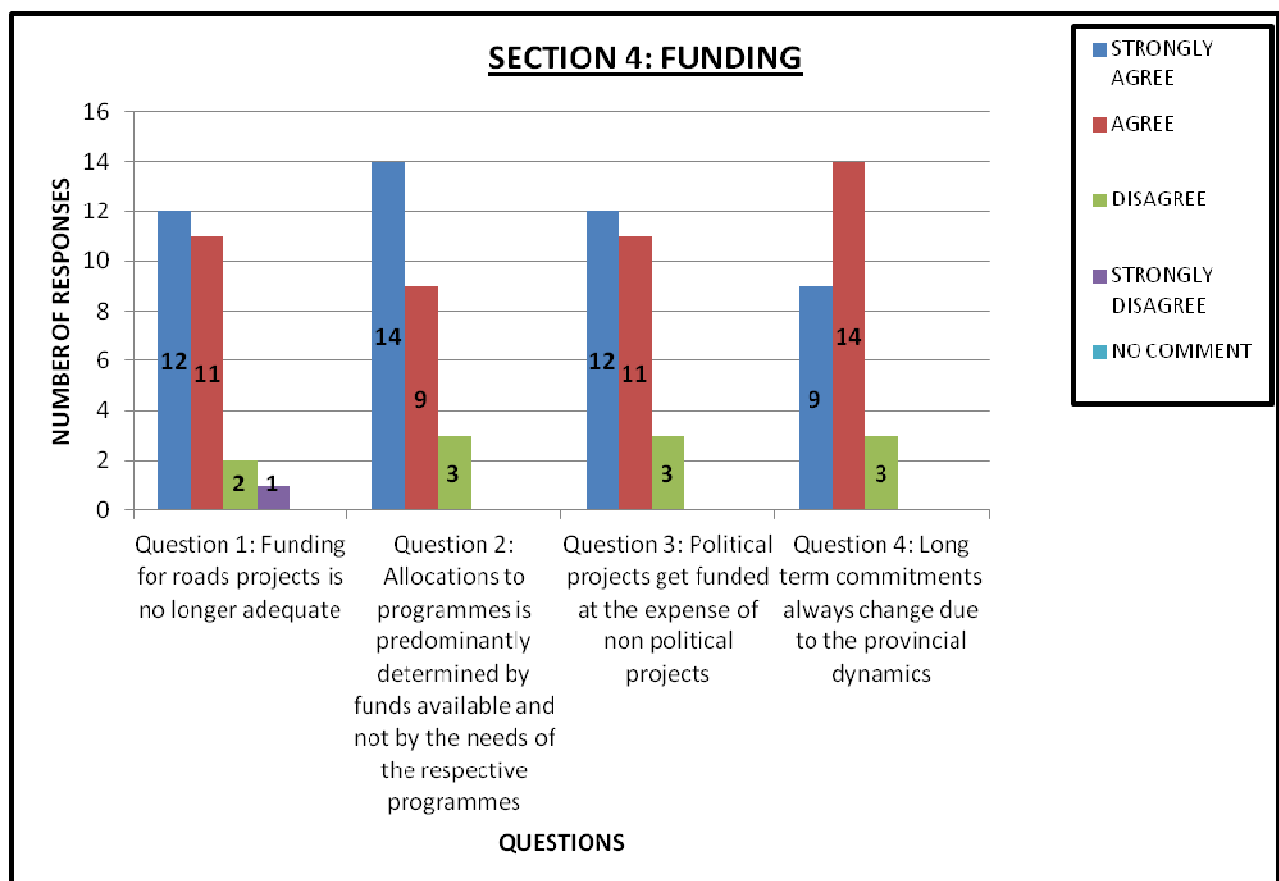


Fig 22: Objective 2 results

Response to question 1 of section 4:

The results show that the majority of the respondents appreciate the fact that allocations for projects are no longer adequate. 12

people 'strongly agree' and 11 'agree'. This gives a total of 23 respondents (88%) with the same perception.

Response to question 2 of section 4:

14 respondents (53%) strongly believe that allocations are determined by funds available and not the existing needs. 9 respondents just 'agree' with the idea. This gives a total of 88% of respondents sharing the same perception. This could be because project plans always get changed downwards to match the allocations given.

Response to question 3 of section 4:

12 respondents 'strongly agree' that political projects get funded at the expense of other projects. 11 respondents also 'agree' with the idea. This gives a total of 88% of respondents sharing the perception that political projects get priority over projects chosen using other criterion.

Response to question 4 of section 4:

23 respondents believe that long term commitments are difficult to sustain within GDRT. This makes up a total of 88% of respondents sharing the same idea but with 35% of them actually strongly agreeing with the idea.

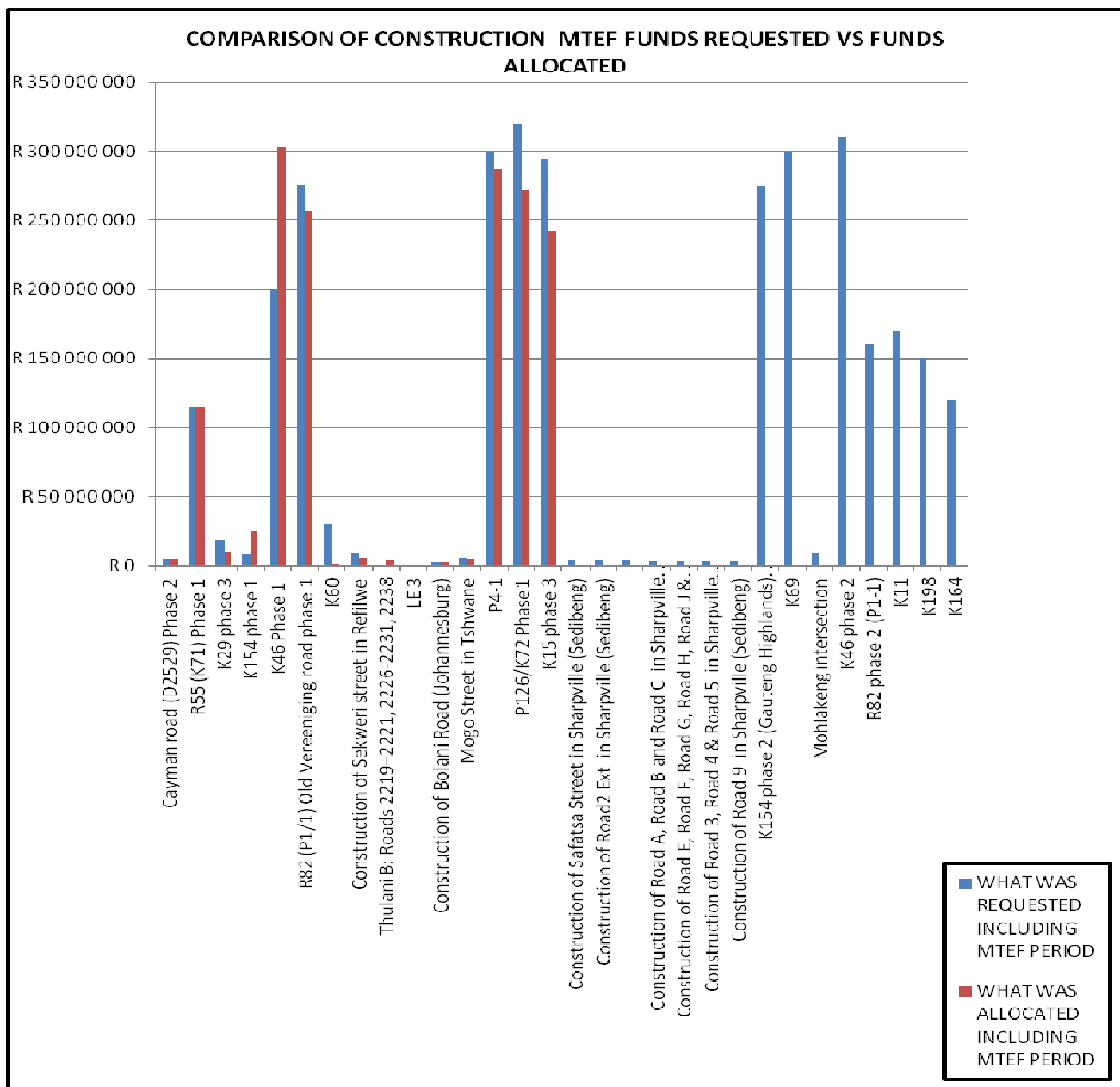


Fig 23: 2012/13 MTEF anticipated allocations and actual allocations (South Africa. Gauteng Department of Roads and Transport, 2012)

The data shows that 8 construction projects planned for the MTEF period were actually dropped due to the funds which were allocated. It's also reflected that out of the R3.1 billion requested over the MTEF; only R1.5 billion was allocated which shows a reduction of 50% to what was originally anticipated.

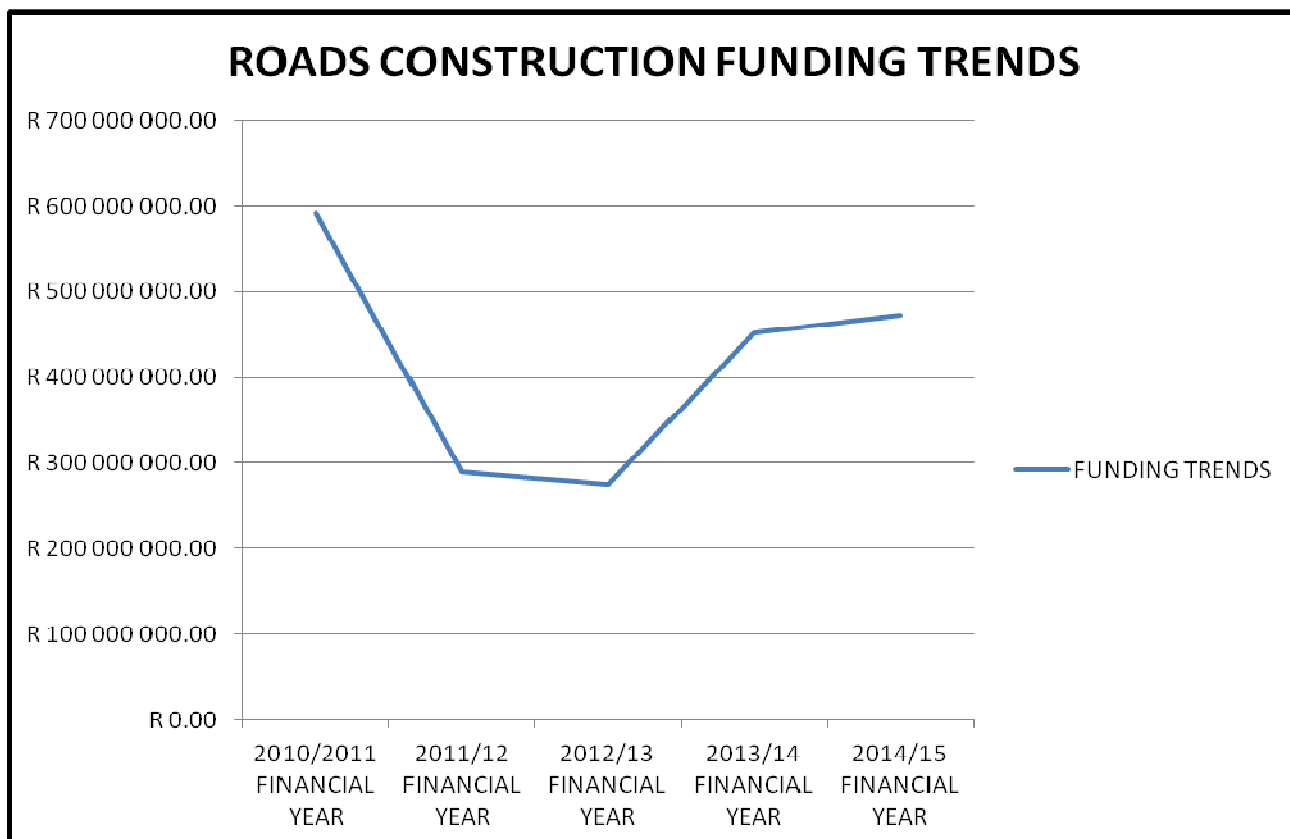


Fig 24: GDRT Construction funding trends since 2010/11 (South Africa. Gauteng Department of Roads and Transport, 2012)

The data shows that Construction funding trends have been going down since the 2010/11 financial year till now. Even though the trend shows that funding trends may rise from 2013/14 to 2014/15, they can never get to where they were in 2010/11. This may be a reflection that allocations to Departments are generally reducing due to a spectrum of economic challenges and national fiscal demands.

5.3.2.1 Summary of results for objective 2

The dominant perceptions among respondents and the reflection from the secondary data obtained within GDRT show that:

- Road funding is no longer adequately covering the needs which exist
- Not all projects planned get funded and in place
- Political projects get priority over all other projects selected using any other criterion
- Long term commitments are not sustainable within GDRT
- What is requested and planned may be cut and some planned projects can actually fall off the plans due to the inadequacy of allocations
- Funding trends have been going down over the past 5 years

5.3.2.2 Objective 2: Discussion and integration

Since the research results clearly show that the traditional MTEF funding model can no longer cope with the demand generated by the projects' needs, it may be enough justification to adopt the PPP models as funding alternatives. However, the results also reflect that projects only get funded if funds are available even though they appear on the plans. This is in antagonism with what the World Bank, (2009:p14), believes, that the public sector must have a robust, forward-planning program and allocation process which allows payments to be made when due, such as obligations against future budgets before committing. If along the way funds become insufficient, there is a likelihood that GDRT may back off on their commitments which may pose a risk to the private sector. The planning process may further be distorted by the fact that political projects get priority over all other projects selected using any other criterion as reflected in the results obtained. Based on Saragiotis,(2009:p24) ingredients for a successful implementation of PPPs, PPP projects must be integrated within government's investment strategy, medium term fiscal framework, and the

budget cycle; must be pursued only if they create value for money when compared with standard public procurement methods, must be able to leverage governments' ability to develop necessary infrastructure, without creating unrealistic long-term fiscal commitments and they need to be embedded in the budget framework to manage investments and related risks. Contrary to this, the results show that long term commitments are not sustainable within GDRT and what is requested and planned may be cut and some planned projects can actually fall off the plans due to the inadequacy of allocations. This may imply that adoption of PPPs within GDRT creates long term commitments which may not be satisfied ultimately. Also considering that annual funding trends have been going down over the past years, as reflected in the results, GDRT may end up with heavy liabilities which may cost it more money in interests and legal fees in the long term.

5.3.3 Results for objective 3

To review the suitability of GDRT's internal environmental elements to the adoption of PPP models

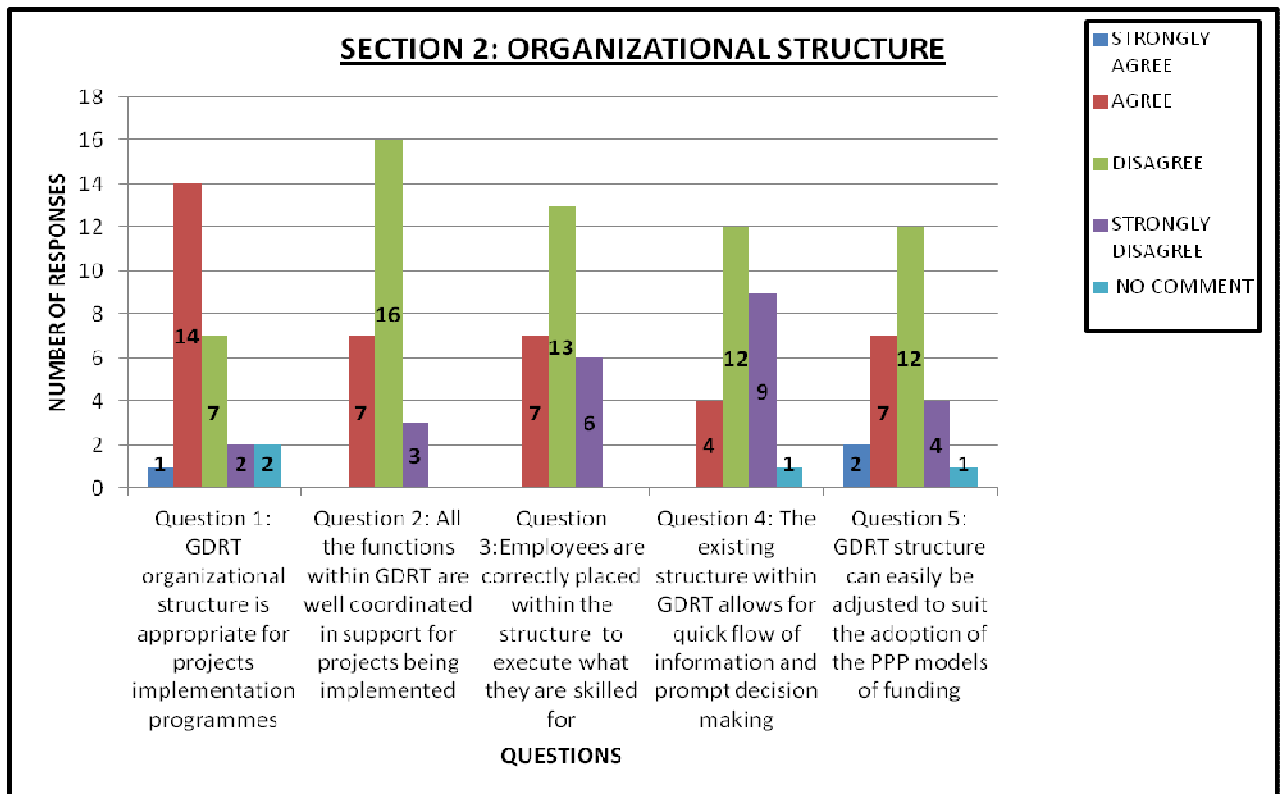


Fig 25: Objective 3 results

Response to question 1 of section 2:

The results show that 15 (57%) respondents believe that the organizational structure for GDRT is appropriate for projects implementation programmes.

Response to question 2 of section 2:

73% (16 +3) of the respondents are of the opinion that there lacks coordination among the functions within GDRT to support the projects being implemented.

Response to question 3 of section 2:

6 respondents 'strongly disagree' that employees are correctly placed within the structure to execute what they are skilled for. 13 respondents also just 'disagree' with the idea. This gives a total of

73% of respondents not agreeing with the perception that people are properly placed within the existing GDRT structure.

Response to question 4 of section 2:

Results show that 12 people 'disagree' while 9 people 'strongly disagree' with the idea that the structure within GDRT allows quick flow of information. That implies that a total of 81% of respondents disagree with the idea that the structure within GDRT allows quick flow of information.

Response to question 4 of section 2:

Results show that 16 (61.5%) respondents do not believe that the existing structure within GDRT may easily be adjusted to cater for the adoption of PPP models of funding. This could be a reflection of the rigidity which exist within the structure or poor change management methods.

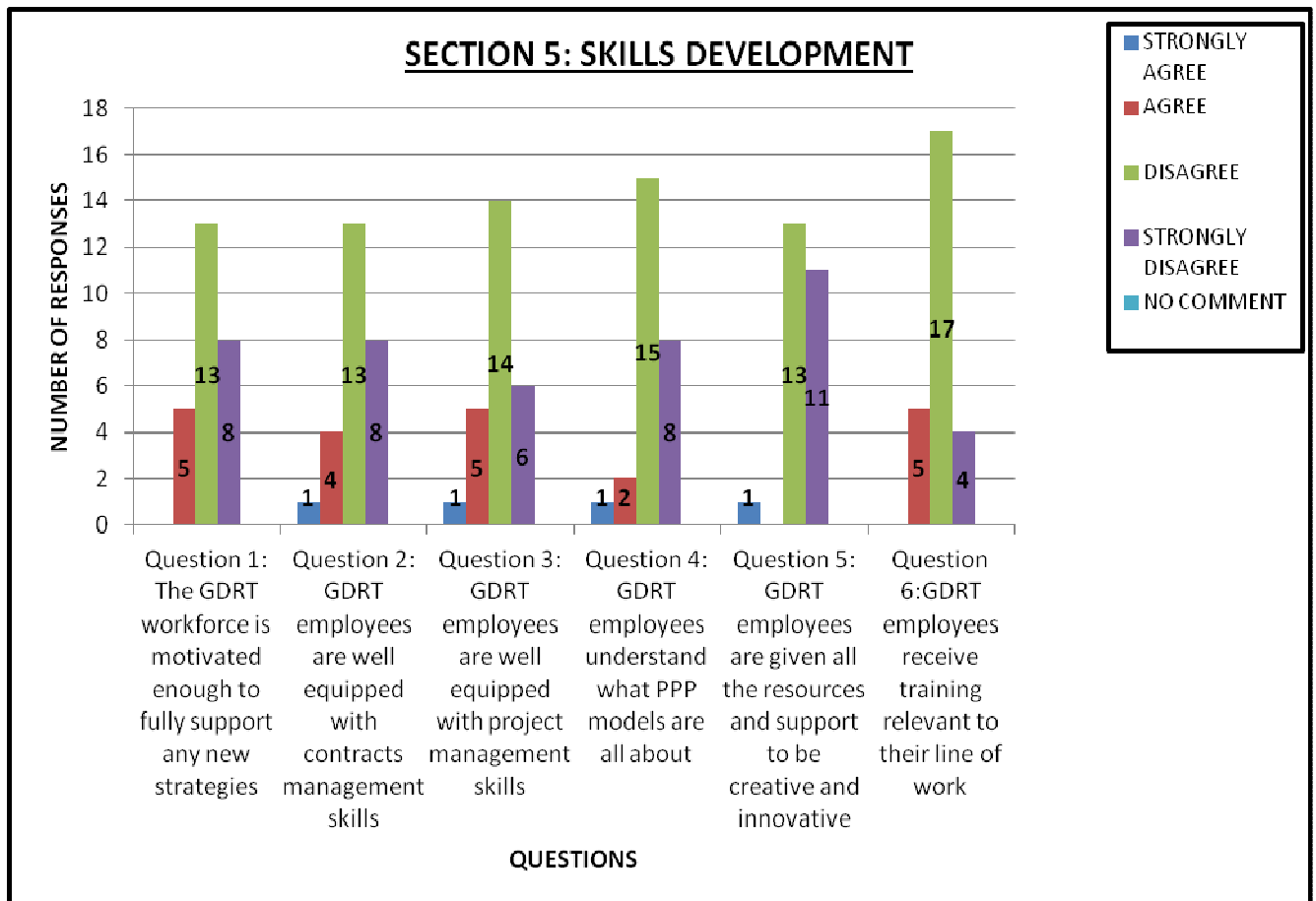


Fig 26: Objective 3 results

Response to question 1 of section 5:

Results show that 21 (81%) respondents believe that GDRT employees are not motivated enough to support any new strategies. 8 of these actually 'strongly agree' that motivation levels are low. This may be because the Human Resources section isn't focusing on elements which can keep the workforce motivated enough to fully support GDRT's strategies.

Response to question 2 of section 5:

Results show that 21 (81%) respondents believe that GDRT employees are not equipped with contracts management skills. This may be due to the skills development and skills acquiring strategies adopted within GDRT.

Response to question 3 of section 5:

Results show that 20 (77%) respondents believe that GDRT employees are not equipped with project management skills. This may also be due to the skills development and skills acquiring strategies adopted within GDRT which are poor.

Response to question 4 of section 5:

Results show that 88% (15 + 8) of the respondents acknowledge that most employees do not know what PPP models are all about. This may be because the employees hired to be in charge of projects do not have the skills which allow the appreciation of PPP models or that the skills development plans never included comprehensive PPP training.

Response to question 5 of section 5:

The results reflect that 92% (13+11) of the respondents believe that creativity and innovativeness is absent within GDRT because of lack of supporting structures and resources. Of the 92%, 42% actually 'strongly agree' and 54% just 'agree' with the perception. This could be due to the existing internal working conditions which the employees go through or lack of appreciation by senior managers of the fact that innovation has to be natured among employees.

Response to question 6 of section 5:

Results show that 81% (17 + 4) of the respondents believe that training given is not directly relevant to the line of work employees do. This could be because there isn't much effort put to do a skills gap analysis, or funds do not allow employees to attend all courses they deem relevant.

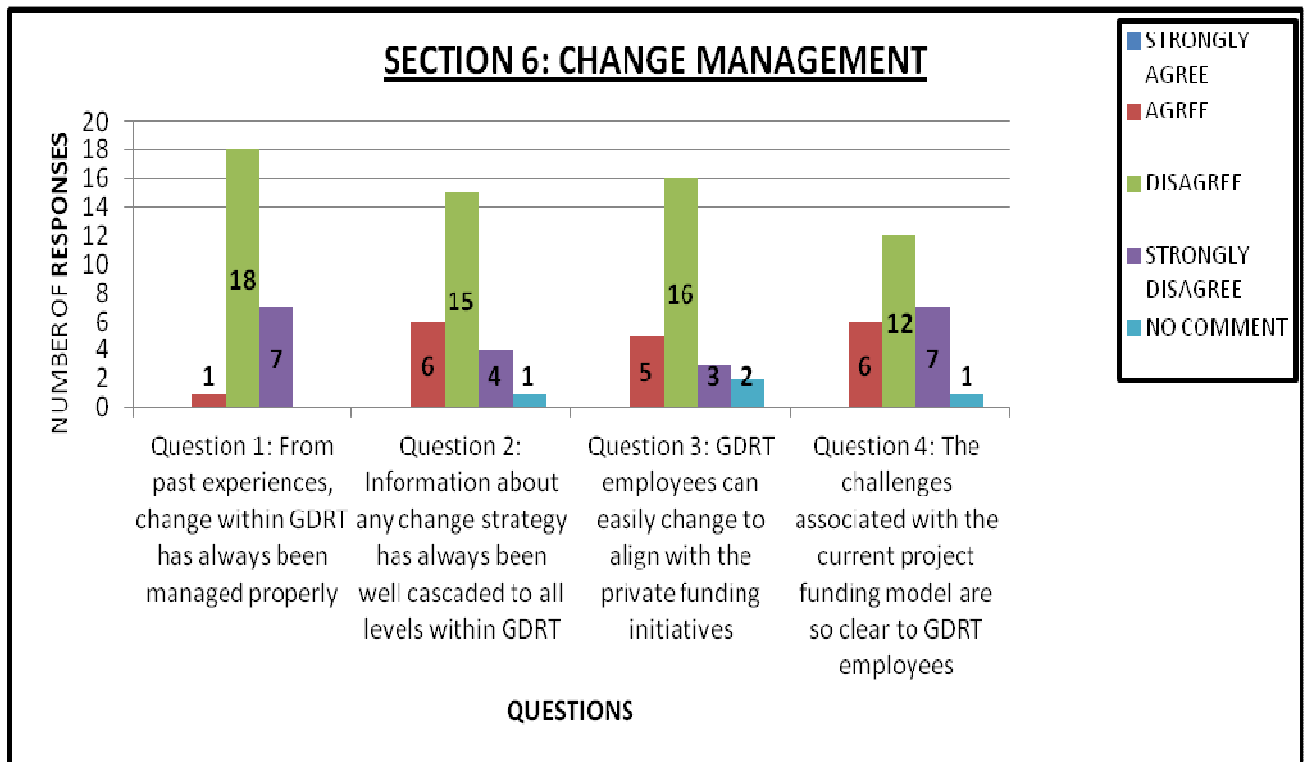


Fig 27: Objective 3 results

Response to question 1 of section 6:

Results show that a staggering 96% (18 + 7) of the respondents believe that change is always poorly managed within GDRT. This is likely due to poor change management skills within GDRT or leadership changes before change processes are completed.

Response to question 2 of section 6:

The responses show that 73% (15+4) of the participants believe that information about any new strategies is not well cascaded to lower levels within GDRT. This may be attributed to the poor change management skills within GDRT or the 'tall' structure which doesn't allow information to reach the bottom levels quickly.

Response to question 3 of section 6:

The responses show that 73% (16+3) of the participants believe that GDRT employees may not change to align with the private funding initiatives. This could be a result of change fatigue, the culture of rigidity or their personal interests in the traditional funding model.

Response to question 4 of section 6:

The responses show that 73% (12+7) of the participants believe that GDRT employees lack the appreciation of the challenges which may be caused by the current funding model.

5.3.3.1 Summary of results for objective 3

The dominant perceptions among respondents are that:

- The GDRT organizational structure is appropriate for projects implementation
- There is no proper coordination among GDRT functions to effectively execute projects
- There is skills misplacement within GDRT
- Information do not easily flow or cascaded across levels within GDRT
- The existing GDRT structure may be difficult to adjust, if need be, in order to suit the implementation of PPP models
- Motivation levels within GDRT are low and it results in employees not putting effort to support new strategies
- Contract and project management skills lack within GDRT
- Generally GDRT employees do not have adequate information about PPP models
- Poor internal support result in low motivation and creativity levels among GDRT employees

- Skills development is not informed by the existing skills gaps within GDRT
- Changes are poorly implemented within GDRT due to poor change management skills
- Change information is confined to higher levels without being cascaded to lower levels within GDRT
- GDRT employees have developed a culture of resisting change
- There is no adequate appreciation of the consequences of continuing to use the current models considering that they no longer sustain the funding demands which exist

5.3.3.2 Objective 3: Discussion and integration

It is very critical for government institutions who want to implement PPP models to have the ideal structure. This is according to Saragiotis, (2009:p2). The survey revealed that the GDRT structure is ideal for projects implementation but the functions set to tackle the projects are not well coordinated. The model by Burke (2010) emphasises the need for the coordination of all functions in support of any strategy developed by an entity. IMF (2004:p15), Farquharson et al, (2011:p15, 16) and Saragiotis,(2009:p24) all acknowledge that there is need for skills development, ideal policies and legislation, adequate future committed funds among other things for PPPs to be a success. All these elements are responsibilities of the various functions within GDRT and their coordination in support of the PPP strategies is imperative. Skills are also very important when adopting the PPP models according to the IMF (2004: p15). This is because there is need to manage the complex agreements involved in the PPP models. However results of this study show that the skills are misplaced within GDRT which may result in them not being effective. The fact that most GDRT

employees believe that the existing structure does not allow the easy flow of information across levels means that it may be difficult to implement the PPP models with the support of employees on all the levels. Because these models will be new and non-conventional within GDRT, there is need for all the levels to appreciate them and have a buy in. The low motivation levels to support new strategies reflected in the results could actually be a result of the failure to cascade information across levels which may pose a major challenge.

The United Nations (2008: p23) publication places emphasis on the fact that there are a number of new skills that must be developed before adopting PPPs, such as negotiation, contractual and financial skills, while the World Bank (2009) says that the private sector wants assurance that the policy makers and the parties implementing projects have a realistic understanding of the complexity of PPP projects. This shows how important it is for employees of a public institution to have enough knowledge about PPPs and the relevant skills required. Unfortunately, GDRT may be challenged because the responses obtained show that contract and project management skills lack within it and that GDRT employees do not have sufficient information about PPP models. The results also reflect that skills development is not informed by the existing skills gaps within GDRT. This means that even if the employees may realise the need to equip themselves with PPP skills, the processes and systems may not allow them to get that exact training.

Because GDRT has been relying on the traditional MTEF funding model for some time, switching to PPPs or partially adopting PPP models within their funding options would require some change. The change would be in the systems applied and some procedures. There will also be a need for a cultural shift because employees are

probably so much used to their traditional way of doing business. As captured in the six step model by Mabey (2008: p15), change has to be articulately implemented for it to be successful. Already results show that change is not properly implemented within GDRT and that information about change is restricted to higher levels. Also portrayed by the results is the belief that GDRT employees have developed a culture of resisting change. This could be change fatigue due to repetitive change processes which never bear results or due to the way the change process is applied. Saragiotis,(2009:p64) admits that government institution's change management capabilities play a major role in changing people's mind sets about the PPP models. In terms of cultures which need to be changed, the World Bank (2007:p1), alludes to the fact that government agencies have a culture of being corrupt and uncoordinated and these have to be changed if PPP programmes have to be successful.

5.3.4 Results for objective 4

To establish the impact of politics on the adoption of PPP models within GDRT

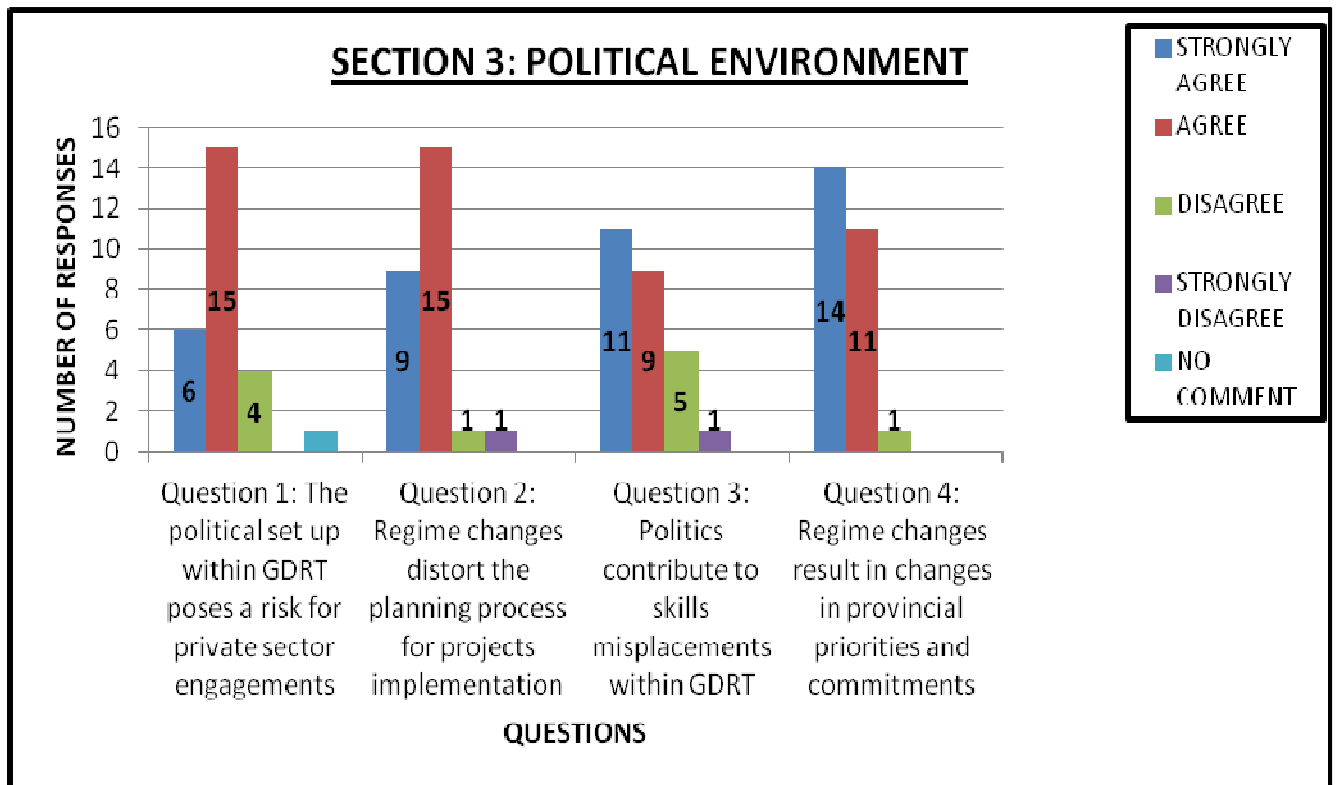


Fig 28: Objective 4 results

Response to question 1 of section 3:

Results show that 73% of the respondents don't believe that the political set up within GDRT is on its own a risk when it comes to private sector engagements.

Response to question 2 of section 3:

92% (15 +9) of the participants believe that regime changes distort the planning processes within GDRT. This may be because each leadership regime brings its own priorities which displace the existing plans or does not equally prioritise them.

Response to question 3 of section 3:

Results show that 81% of the respondents believe that politics cause skills misplacements. This may be a result of those who get

placed due to their political alignments and loyalties to political leadership. It may also be just a result of ineffective skills placement systems within GDRT.

Response to question 4 of section 3:

Results reflect that 96% of participants believe that regime changes result in changes in Departmental priorities and commitments. This may be because each leadership brings its own priorities and commitments which override the existing plans.

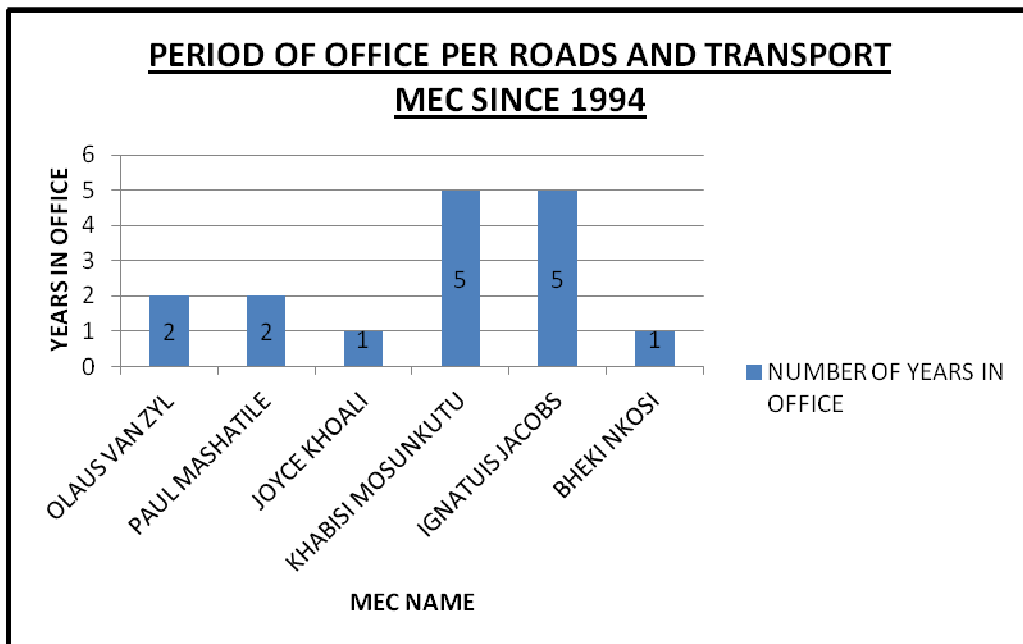


Fig 29: GDRT MECs periods in office (Phala, 2012)

The data shows that the longest MECs lasted 5 years. This could be because no MEC survives the change in political leadership which also normally has a life span of 5 years. Besides the two who lasted for the full five years, the other four left office after a maximum of 2 years.

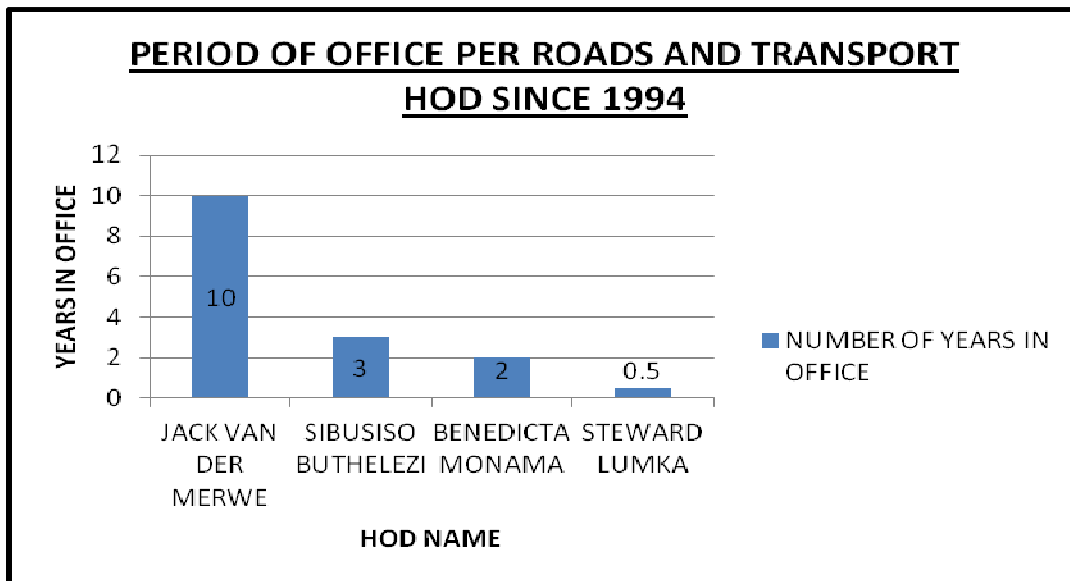


Fig 30: GDRT HODs periods in office (Phala, 2012)

The data shows that only one HOD lasted 10 years since 1994. The periods they are spending in office are actually reducing over time. This may be a reflection of the dynamics happening within the provincial political spheres.

5.3.4.1 Summary of results for objective 4

The dominant perceptions among respondents and the indications from the data collected within GDRT are that:

- The political set up within GDRT is not a risk for the private sector (this may be because politicians obey the rule of law hence the private sector is protected by legislation)
- Regime changes distort the planning processes within GDRT
- Skills misplacements within GDRT are dominantly due to politics
- Provincial priorities and commitments are changed whenever there is a regime change
- GDRT MECs normally last a maximum of 5 years in office
- GDRT HODs are spending shorter periods in office and the periods are reducing with time

5.3.4.2 Objective 4: Discussion and integration

Even though the results show that the political set up within GDRT is not a risk for the private sector, it may only be so when all is ideal. This may also mean that the political set up is not generally a risk to the private sector but becomes a risk when it comes to PPP engagements. This argument is supported by the fact that the results show that regime changes affect the planning processes within GDRT. The results also support the idea that skills misplacements within GDRT are dominantly due to the provincial politics. According to the IMF (2004), it is very important to establish clear channels of responsibility and accountability for government involvement in PPPs. If however personnel are placed politically to pursue personal political agendas, there won't be much accountability and objectivity within GDRT structures. Due to the fact that research results reflect that provincial priorities and commitments are often changed whenever there is a regime change, it does not align well with arguments by authors like Saragiotis,(2009:p24) and Farquharson et al, (2011:p38) who believe that for PPPs to be successful, there has to be long term commitments. The commitments must be sustainable even if regimes change. Unfortunately, when leadership changes within GDRT, priorities also change and some commitments may fall through the cracks. The argument is strengthened by the data obtained within GDRT which shows that MECs have been lasting for a maximum of 5 years in office and HODs are also spending shorter periods in office with the exception of one who spent 10 years in office since 1994. Because generally PPP repayment commitments stretch for more than 5 years, the research findings are a red flag hinting that it may be a challenge to adopt PPPs with the current set up.

5.4 Conclusion

The data obtained in this chapter was analysed and the results will be used to make conclusions and recommendations in the proceeding chapter i.e. chapter 7. The responses were very impressive and gave the researcher confidence that the results which he got were a true reflection of GDRT employees' perceptions on the questions contained in the questionnaire.

6 Chapter 6: Conclusion and Recommendations

6.1 Introduction

The preceding chapters covered the literature review, models relating to PPPs, the research design adopted and a presentation of the challenges GDRT is facing in relation to the funding models it is using and the service delivery backlog which exist. All that, together with the data received from the survey, enabled the analysis which was done and the subsequent results which were obtained.

This chapter therefore seeks to wind up the whole research with conclusions derived from the results and recommendations which can be proposed in order to improve the existing set up within GDRT for the conditions to be conducive for the adoption of PPP models as alternative funding models.

The research statement for this research is: "The Applicability of Public Private Partnerships as Alternative Funding Models within the Gauteng Department of Roads and Transport".

6.2 Conclusions

From the results, it may prove to be an uphill challenge for GDRT to adopt PPPs as alternative funding models. This is unfortunate because currently, the roads infrastructure is deteriorating at a faster rate than normal due to a number of factors mentioned in chapter 1. It therefore means that there is need for a catalysed but controlled process which looks at the factors which prohibit GDRT from adopting PPP models and how these can be addressed. Some of these factors which proscribe the adoption of PPP models, as informed by the results, are discussed below:

- The political involvement in the operational levels of GDRT negatively impacts a number of aspects of service delivery especially where PPP models are considered as options to help the roads service delivery backlog situation. PPP frameworks require all parties to commit to their responsibilities and one of GDRT's responsibilities would be to have sustainable commitments in terms of funds for the repayments to the private funders. This may be compromised because the results show that the frequency at which provincial political leadership change is very high. Unfortunately these regime changes trigger changes in priorities as well. This may mean that no long term commitments can survive in the current provincial political environment. As the new leadership comes, there is also a tendency to place allies on key positions. This is reflected in the results which show high levels of skills misplacements. This compromises PPP models' implementation because it is imperative that the agreements are formulated and managed by very skilled personnel who are correctly placed to execute their duties. The other element revealed by the results is that political projects get funded at the expense of other projects. This clearly does not align well with the adoption of PPP models because projects identified for PPP models must be selected objectively with enough justification regardless of whether the project is political or not.
- In terms of the structure, it is a requirement for any entity which implements projects to have a structure whose functions are well coordinated towards the execution of the projects. The likely challenge within GDRT is that results show that the silo approach is dominant and this may make it difficult for it to adopt the PPP models. The nature of the structure also does not allow information to flow easily across all levels. This isn't

healthy in a situation where an organization has to adopt a new funding model alien to most of the employees. There is need for proper information dissemination so that every employee understands the objectives of the change and what the change process entails and aims to achieve. The picture from the results showing that there is a culture to resist change within GDRT is likely due to the poor dissemination of information especially to lower levels about change initiatives. Unfortunately PPPs may not be easily implemented in such an environment.

- In terms of skills, there is need to have adequate skills and experience in order to tackle PPP projects and their complexities successfully. The shortage of contract management and project management skills within GDRT poses a risk of failing to effectively implement PPP models. Skills development is also not done systematically hence the results show that the real skills gaps within GDRT are not fully covered by the training offered.
- The fact that there is no guarantee for long term commitments means that the future financial commitments which characterise the adoption of PPP models may not be sustainable within GDRT. PPPs require the government entity to have funds available for future payments according to the agreement they would have entered into. However the results show that funding is dwindling with time, some projects fall off the plans due to the inadequacy of funds and priorities get changed so often that no guarantee exist for the private parties that if they enter into the agreements, they do not suffer financial risks.

- The legislation and policy framework within GDRT may also not currently allow the adoption of PPP models as reflected by the results obtained from the survey carried out. This may be because of the misalignment which exists between strategies and the policies and legislation. An example is the Revenue Collection Policy which totally excludes provincial government departments from the list of entities which may collect revenue from service recipients. Another example is the challenge currently being faced by SANRAL with the E-Toll project. There is no legislation which empowers SANRAL to penalise road users if they do not buy e-tags (Robby, 2012). Ideally SANRAL was supposed to get legislative support before finalising their model design for the E-Tolling system. All this implies that unless a clear understanding and appreciation of the need to align policies and legislation with the strategy to adopt PPPs is developed, all may be in vain.

6.2.1 Contribution to knowledge

This research contributes a great deal to the knowledge base which exists within GDRT about PPPs. It gives guidance in terms of what to consider before the adoption of a PPP model and the justification thereof. It also gives a spectrum of the various forms of PPP models which exist together with their advantages and disadvantages. Knowledge about these various forms of PPP models will enable GDRT to adopt the best suited for their projects and set up. From the results, elements which may prohibit the adoption of PPPs are discussed and this is helpful information especially if GDRT is to realise the real advantages of an effective PPP engagement. Also since there is no internal document within GDRT guiding the adoption of PPPs except the one published by the South African

National Treasury, this research may actually be considered as an ideal guide customised to GDRT.

6.3 Recommendations

The following recommendations may be considered to improve the applicability of PPPs as alternative funding models within GDRT in order to reduce the roads service delivery backlog:

- The situation of funds inadequacy must be explained across all levels in order for all employees to appreciate the need to adopt alternative funding models
- Strict systems must be put in place to ensure that even if political leadership changes, priorities remain in place and commitments continue to be honoured.
- Human resources policies must be enforced non selectively to ensure that all employees are recruited and placed according to their expertise and not according to political alignments and personal loyalties
- Skills development programmes must always be regarded as investments and not unnecessary expenditures especially when a need arises due to new strategies
- Policies must be developed to ensure a conducive environment for the adoption of PPP models
- PPP agreements must be critically analysed and managed by well skilled personnel who understand their complexities
- Risk identification and management skills must be natured within GDRT to ensure that risks associated with PPP models may all be identified before any engagements

- Contracts and project management skills must be promoted through creation of training opportunities.
- Structural adjustments must be done to eliminate the silo tendencies and to ensure that all functions are well coordinated towards PPP models' adoption
- Because PPP models will be new to most employees, a change process must be meticulously followed to achieve substantial buy in and support from the rest of the work force
- Political buy in must be obtained before a decision to adopt PPPs is made
- Buy in from the Treasury Department must be sought to ensure that they support the strategy and set aside monies for future commitments

6.3.1 Recommendations for further/future studies

- Considering that the results obtained in this research show that the dominant elements which determine the applicability of PPPs within GDRT are politics, relevant skills availability, existence of suitable legislation and policies, existence of ideal structures and the sustainability of priorities and financial commitments, future researches may focus on each of these elements in an attempt to unpack them and establish the possibilities of making them suitable for the adoption of PPP models.
- Because the sample size could not be extended to include other sections within and out of GDRT who are responsible for some of the other elements which came out in the results as determining the applicability of PPPs because of time limitations and their unwillingness to participate in the research as discovered in the trial run of the survey, future researches may seek to focus on the inclusion of such sections
- Because PPP models have not yet been applied enough within GDRT, the results were only based on employees' perceptions and not any quantitative data which could have justified categorical conclusions, future research could then focus on a quantitative approach to the same topic in order to establish categorical conclusions and also to see how the results will relate to this qualitative research (triangulation).

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8 APPENDICES

8.1 QUESTIONNAIRE

Dear Participant

The purpose of this questionnaire is to collect data for a study on **“The Readiness Of The Gauteng Department Of Roads And Transport To Adopt The Public Private Partnerships Approach In Order To Reduce Roads Service Delivery Backlog”**

You are kindly invited to answer the questions attached as part of the survey to feed into the research project.

Please do not enter your name on the questionnaire as all the responses will be treated strictly confidentially. Data will be presented only in the aggregate and responses will not be attributed to a particular respondent. Completed questionnaires should be emailed back to the researcher at etchigurah@yahoo.co.uk within seven days or less or you can contact the researcher for collection on 082 908 1210 or 078 163 2542.

Note that permission has been granted by the DDG Roads to undertake this study within the Gauteng Department of Roads and Transport.

Your participation in this survey is greatly appreciated.

Yours Sincerely,

Ernest Tawanda Chigurah

In responding to all the sections in this survey, read the statement carefully and choose a response from the options provided. Mark your response with an **X**.

SECTION 1.0: PERSONAL AND GENERAL INFORMATION

1 Indicate the branch you work in

ROADS	CORPORATE SERVICES	TRANSPORT	PROJECT MANAGEMENT

2 Indicate your gender

MALE	FEMALE

3 Indicate your level of responsibility

LEVEL 10 AND BELOW	LEVEL 11 OR 12	LEVEL 13 OR ABOVE

4 Indicate your period of experience within the Gauteng Department of Roads and Transport

5 YEARS AND BELOW	6 YEARS TO 10 YEARS	10 YEARS AND ABOVE

5 Indicate your main qualification category

ENGINEERING	MANAGEMENT	COMMERCIAL (NOT MANAGEMENT)	SOCIAL SCIENCES	OTHER (Specify)

SECTION 2.0: ORGANIZATIONAL STRUCTURE

QUESTION NUMBER	QUESTION	RESPONSE				
		STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE	NO COMMENT
1	GDRT organizational structure is appropriate for projects implementation programmes					
2	All the functions within GDRT are well coordinated in support for projects being implemented					
3	Employees are correctly placed within the structure to execute what they are skilled for					
4	The existing structure within GDRT allows for quick flow of information and prompt decision making					
5	GDRT structure can easily be adjusted to suit the adoption of the PPP models of funding					

SECTION 3.0: POLITICAL ENVIRONMENT

QUESTION NUMBER	QUESTION	RESPONSE				
		STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE	NO COMMENT
1	The political set up within GDRT poses a risk for private sector engagements					
2	Regime changes distort the planning process for projects implementation					
3	Politics contribute to skills misplacements within GDRT					
4	Regime changes result in changes in provincial priorities and commitments					

SECTION 4.0: FUNDING

QUESTION NUMBER	QUESTION	RESPONSE				
		STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE	NO COMMENT
1	Funding for roads projects is no longer adequate					
2	Allocations to programmes is predominantly determined by funds available and not by the needs of the respective programmes					
3	Political projects get funded at the expense of non-political projects					
4	Long term commitments always change due to the provincial dynamics					

SECTION 5.0: SKILLS DEVELOPMENT

QUESTION NUMBER	QUESTION	RESPONSE				
		STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE	NO COMMENT
1	The GDRT workforce is motivated enough to fully support any new strategies					
2	GDRT employees are well equipped with contracts management skills					
3	GDRT employees are well equipped with project management skills					
4	GDRT employees understand what PPP models are all about					
5	GDRT employees are given all the resources and support to be creative and innovative					
6	GDRT employees receive training relevant to their line of work					

SECTION 6.0: CHANGE

QUESTION NUMBER	QUESTION	RESPONSE				
		STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE	NO COMMENT
1	From past experiences, change within GDRT has always been managed properly					
2	Information about any change strategy has always been well cascaded to all levels within GDRT					
3	GDRT employees can easily change to align with the private funding initiatives					
4	The challenges associated with the current project funding model are so clear to GDRT employees					

SECTION 7.0: EXTERNAL ENVIRONMENT

QUESTION NUMBER	QUESTION	RESPONSE				
		STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE	NO COMMENT
1	Employees are well aware of the need to consider the alignment of policies before strategies are adopted					
2	The existing acts, policies and legislation align well with the adoption of PPP models of funding					
3	There is clear understanding of the external economic dynamics which warrant adoption of PPPs					
4	GDRT's social responsibilities align well with PPP models					
5	GDRT has an ability to deal with external risks associated with PPPs					