



Corruption in Infrastructure Procurement - A Study Based on Procurement of Infrastructure Projects in Pakistan

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Declaration

I hereby declare that this thesis has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree. I declare that this thesis is the result of my own investigations, except where otherwise stated. I also give consent for my thesis, if accepted, to be available for photocopying and for inter-Library loan and for the title and summary to be made available to outside.

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Dedication

**I heartily dedicate this thesis to my beloved daughter
“Amna Shabbir” and my dearest sister-in law “Aqleema Munir”
for bearing a lot of pressure and toughness on my behalf during my
studies.**

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Abstract

The main purpose of this research project is to bridge the existing knowledge gap in the empirical identification and understanding of the most frequent corrupt actions and the causes behind during procurement of infrastructure projects in Pakistan, in addition to exploring the ways to enhance institutional-based trust between the participants of the procurement process. Consequently the study aims to provide a conceptual framework to control corruption in infrastructure procurement while proposing the institutional trust-building mechanisms. Both qualitative and quantitative approaches are utilised in this study to achieve this research aim. Quantitative research data is collected using a questionnaire survey. A total of 450 questionnaires were sent to various people engaged in procurement of infrastructure projects in Pakistan. The response rate was 36.7% (n=165). The questionnaire comprises of two main questions; one is about the most frequent corrupt actions in traditional and Public Private Partnership (PPP) infrastructure procurement processes while other question asks about the perceived institutional trust-building mechanisms in context of infrastructure procurement market in Pakistan. Various appropriate statistical methods, including Mean Ranking and ANOVA were utilised to analyse the collected data. The questionnaire survey was followed by 15 in depth semi-structured interviews with a variety of stakeholders. These interviews provided information on various causes of corruption and reasons as to why people do not for example report a known incident of corruption.

A traditional content analysis approach was used to analyse the data collected using interviews. From the analysis a cyclical framework of corruption control emerged, and this is outlined within the thesis. The goal of this framework is to facilitate procurement stakeholders (individuals, groups, or organisations), to improve their anti-corruption plans from project to project. This research study has filled the knowledge gap through identifying the top twenty potential corrupt practices in traditional and PPP infrastructure procurement processes in Pakistan and explored the causes behind their occurrence. The study also recommends the solutions to mitigate this problem throughout the life cycle of procurement process. In addition, the study proposes the institutional trust-building mechanisms in the context of infrastructure procurement market in Pakistan to cater for the likely loss in trust due to perceived level of corruption in this sector. The study has also introduced a conceptual framework to control corruption in infrastructure procurement process in general and particularly in Pakistan. The framework does not intend to introduce new alternatives but instead builds on existing practices so that users can more easily adapt to the improvement. The findings of this research are believed to be useful for all practitioners who are either considering or currently involved in infrastructure procurement process in Pakistan and trying to avoid or minimise the influence of corruption.

Keywords: Infrastructure, Procurement, Corruption, Public-Private-Partnership, Pakistan

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Abbreviations

ACR	Annual Confidential Report
ADB	Asian Development Bank
AGP	Auditor General of Pakistan
CCC	Concept Clearance Committee
CDA	Capital Development Authority
CDWP	Central Development Working Party
CPDI	Centre for Peace and Development Initiatives
CPI	Corruption Perception Index
DDWP	Departmental Development Working Party
DFID	Department of International Development
ECNEC	Economic Committee of the National Economic Council
FIDIC	International Federation of Consulting Engineers
FOI	Freedom of Information
GCC	General Contract Conditions
GDP	Gross Domestic Product
GoP	Government of Pakistan
ICB	International Competitive Bidding
IMF	International Monetary Fund
IT	Information Technology
LGO	Local Government Ordinance
MDBs	Multilateral Development Banks
NAB	National Accountability Bureau
NGOs	Non-Government Organizations
NHA	National Highway Authority
NLC	National Logistic Cell
OECD	Organisation for Economic Co-operation and Development
PC	Planning Commission
P-DDWP	Provincial Departmental Development Working Party
PDWP	Provincial Development Working Party
PEC	Pakistan Engineering Council

PPP	Public Private Partnership
PPR	Public Procurement Rules
PPRA	Public Procurement Regulatory Authority
PSAs	Public Service Announcements
PSDP	Public Sector Development Programme
RTI	Right to Information
SBDs	Standard Bidding Documents
TI	Transparency International
UNCITRAL	United Nations Commission on International Trade Law
UNDP	United Nations Development Programme
WAPDA	Water and Power Development Authority

1 Introduction

1.1 Research Background

Pakistan is consistently ranked among countries with the highest perception of corruption on Transparency International's Corruption Perception Index(CPI). Corruption steadily increased over the course of the country's history, and became the norm of the society by the 1990s (Khan, 2007). Corruption exists in every conceivable form in the infrastructure procurement process in Pakistan (GoP/NAB, 2002). Publicly funded traditional infrastructure projects also have an international reputation of corruption (Cavill and Sohail, 2007a; Henry, 2009; Kenny, 2009a, 2006; Wren-Lewis, 2012). For an act of corruption to occur, it must be intentional, in conflict with the public service performance objectives, and must have recognizable benefits out of it (Søreide, 2002). On the other hand, there has been strong emphasis around the world to opt for the Public-Private-Partnership (PPP) route of infrastructure procurement for being less vulnerable to corruption as compare to the traditional route of procurement. Klitgaard, (2012) while citing Hammami et al., (2006) says that countries with more corruption and less effective legal systems lack PPP projects, which implies that corrupt deals are not as easily done in PPP projects. However, there are also arguments against PPP which suggest that such deals are inadequate to protect 'public interests' (Minow, 2003) due to the vulnerability of decision-makers being captured by 'private interests' (Martimort and Pouyet, 2008). Klitgaard, (2012:7) argues that "formal economic models of PPPs do not address what to do if both partners [public officials and private contractors] are corrupting the partnership [through collusion]".

The above illustrates that both, traditional and PPP, routes of infrastructure procurement are vulnerable to corruption (Kenny, 2009a; Klitgaard, 2012; OECD, 2007a). The situation becomes worse in country like Pakistan in the absence of a comprehensive regulatory regime where all types of manipulations for corrupt ends may occur and prevention strategies may be difficult to enforce. This establishes the need to investigate how corruption influences a particular mode of procurement by identifying the most likely potential forms of corruption and understanding the causes behind; in addition a comparison

between two modes of procurement in terms of their vulnerability to certain form of corruption is also needed. The outcomes of such investigations should inform and lead to the formulation of anti-corruption strategies to fit the individual needs of each mode of procurement.

The choice of governance mechanisms and procedures during the infrastructure procurement process shape perceptions of procurement participants towards the trustworthiness of the mechanisms followed. Corruption and trust are posited to be polar opposites (Uslaner, 2004). A perception of corruption represents a betrayal of trust and causes a loss of confidence in state institutions, thereby in institutional processes and the roles of public officials (Anderson and Tverdova, 2003; Boehm and Olaya, 2006; Chang, 2013; Chang and Chu, 2006; della Porta, 2000; Doig and Theobald, 2000; Gould, 1991; Miller et al., 2005; Seligson, 2002; Shih, 2010). This establishes the need to explore institutional mechanisms that contribute to build trust between the participants of the procurement process i.e. procurement organisations and private contractors/bidders. Consequently, when procurement organisations emphasise strategies to avoid corrupt practices and wrongdoings during the procurement process, it becomes an essential promoter of perceived institutional trust between the participants involved in the process.

1.2 Rationale for the Study

The rationale for the current study is found in the presentation so far, of the particular problem of corruption found within the infrastructure procurement process, and its damaging impact on institutional trust specifically in the context of Pakistan, where corruption is rampant at every level of the society. The current literature does not identify *what* type of corruption is most likely to occur during a particular mode of procurement, and *what* causes that particular incident of corruption, particularly in context of Pakistan. It is only possible with this intelligence to formulate effective anti-corruption strategies to fit the specific needs of particular type or mode of procurement and the institutional trust-building mechanisms to enhance the trust between the participants of the procurement process to cater for the likely loss in trust due to corruption in this sector. Additionally, a rationale is provided by the gaps in the current literature,

and the fact that as a result of this study, a contribution to that literature will be made.

1.3 Aim of the Research

The aim of this research is to develop a conceptual framework to control corruption during procurement of infrastructure projects while enhancing the institutional-based trust between the participants of the procurement process.

1.4 Research Objectives

In order to achieve the aim of the research, the research objectives are described as follow:

1. To investigate the risk of corruption and its various causes during procurement of both, traditional and PPP infrastructure projects in Pakistan.
2. To investigate the way to enhance institutional-based trust between the participants of the procurement process in Pakistan.
3. To develop a generic framework to control corruption during infrastructure procurement process in general and for Pakistan in particular.

1.5 Scope of the Research

To provide participants of the research project a specific point of reference to reflect upon their practice and opinions, infrastructure procurements specific to a federal level only, have been selected for the investigation. This specific level of infrastructure procurement includes traditional and PPP modes of procurement, and public procurement institutions at federal level in Pakistan.

1.6 Structure of the Thesis

The thesis is presented in nine chapters, each of which is briefly summarised to provide some general guidance for the reader.

Chapter One has provided a general introduction to the research and a rationale for conducting it, functioning as a starting point from which to

highlight the theoretical background to the research. It has also presented the study's aim, objectives and scope.

Chapter Two presents a comprehensive review of Pakistan's public procurement regulatory regime to highlight its weaknesses and shortcomings.

Chapter Three provides a detailed review of the phenomenon of 'corruption', its theoretical paradigms, its occurrence in infrastructure procurement and the causes behind. In addition, strategies to prevent or minimise corruption are also presented in this chapter. The purpose of this chapter is to provide the reader with an understanding of the research subject and discussion.

Chapter Four presents a detailed review of the phenomenon of institutional trust, the impact of corruption on it, and the institutional mechanisms to build trust between the participants of the procurement process.

Chapter Five concerns itself with the 'Research Methodology' adopted for the research investigation. It includes a full description of the qualitative and quantitative approaches used during the research programme.

Chapter Six provides the quantitative results obtained after processing the quantitative data, analyses them, and accordingly, presents a discussion.

Chapter Seven contains the analysis of the qualitative data and provides a discussion of the empirical data in a structured account. Additionally, many examples of responses provided by the members of the research sample are provided as illustrations of their experience and opinions.

Chapter Eight presents a conceptual framework to control corruption in infrastructure procurement suitable for use by all participants, whether individuals, groups, or indeed organisations, that are regularly involved in procurement activities.

Chapter Nine provides conclusions and recommendations, and brings the thesis to an end. It presents a summary review of the research aim and objectives, incorporating the most important achievements of the study, and makes recommendations on the basis of the results. It indicates the limitations of the study and points to areas of further research.

2 Overview of Pakistan's Infrastructure Procurement Regulatory Regime

2.1 Introduction

Infrastructures are the backbone to the path towards sustained economic growth in a country. In Pakistan, the infrastructure projects were traditionally procured through public funds, which mainly came through foreign aid (Ahmed et al., 2013; Tahir, 2005). Despite huge foreign aid for infrastructure development projects, the country has not achieved the desired results instead it has provided rich picking and fuelled corruption (GoP/NAB, 2002). Pakistan is consistently ranked among countries with the highest perception of corruption on Transparency International's Corruption Perception Index(CPI). Corruption steadily increased over the course of the country's history, and became the norm of the society by the 1990s (Khan, 2007). Corruption exists in every conceivable form in the infrastructure procurement process in Pakistan (GoP/NAB, 2002).

A clear and comprehensive regulatory framework is important to avoid corruption in public infrastructure procurement (ADB/OECD, 2006a). This would provide the ground for establishing and implementing transparent and fair procurement practices while providing a significant review and control mechanism (ADB/OECD, 2006a). In the absence of a comprehensive regulatory regime, all types of manipulations for corrupt ends may occur and prevention strategies may be difficult to enforce. The following sections provide a review of Pakistan's legal and regulatory framework of public infrastructure procurement. The review highlights weaknesses in Pakistan's control and oversight mechanisms and inadequacy of rules and procedures which render procurement practices less transparent and more open to corruption with little or no accountability.

2.2 An Overview of Country's Legal and Regulatory Framework

Pakistan is a federation which consists of one federal and four provincial governments. Public procurement rules and regulations are different at federal and provincial levels (GoP, 2009a). Before adopting present 'modern'

practices, the whole public procurement system was governed by the General Financial Rules of the Central Government along with two Manuals each dating back to the colonial era (GoP/PC, 2011a); namely,

- a) The Purchase Manual
- b) The West Pakistan Building and Roads Department Code

In 1999, the Purchase Manual and the Code was modified keeping intact the principle of 'lowest bid win' criteria (GoP/PC, 2011a). In 1999/2000, the World Bank completed the country's first procurement system's assessment which recommended a number of actions including the establishment of a Regulatory Authority (GoP/PC, 2011a). The procurement system at a national level was revamped in 2002 when Public Procurement Regulatory Authority Ordinance was passed via presidential order (ADB/OECD, 2006b). This is now considered as the principal legislation in force for the regulation of public procurement in Pakistan (ADB/OECD, 2006b). The Public Procurement Rules which support this ordinance were finalized in 2004 along with the establishment of the Public Procurement Regulatory Authority (ADB/OECD, 2006b; Mir and Durrani, 2007; Shah et al., 2010).

The Public Procurement Regulatory Authority (PPRA) is an independent body and is responsible for monitoring procurement activities by public sector organizations (ADB/OECD, 2006b; GoP, 2009a). PPRA is responsible for developing procedures and regulatory guidelines for all kinds of public procurement at a federal level made with public funds (ADB/OECD, 2006b; GoP, 2009a). The Public Procurement Rules (PPR) 2004 are largely applicable to procurement of goods and works and do not explicitly mention about services in particular consulting services (GoP, 2009a). For funded projects, procurement rules and regulations of donors prevail local procurement rules and regulations (GoP, 2009a).

PPRA also has the authority to exempt procurement of an object or class of objects from the application of its rules and regulations (ADB/OECD, 2006b). This ultimately undermines the actual aim of establishing this regulatory body for improving the governance and quality of public procurement of goods, works and services while maintaining more transparency and accountability

(ADB/OECD, 2006b; GoP, 2009a; Shah et al., 2010). There are many public procurement organisations which do not follow PPRA and have developed department specific rules and regulations (Transparency International, Pakistan, 2010). This information asymmetry empowers government officials in applying or ignoring the rules at their discretion thus reducing process objectivity and transparency (GoP/NAB, 2002).

To prevent corruption during the procurement process, an oversight and control system needs to be in place. Such a control system should be capable of providing comprehensive access to information regarding procurement rules, regulations, and procedures, and information explaining these procedures to all interested bidders. In the following sections a review of the country's legal and regulatory framework of public infrastructure procurement is presented. The review highlights weaknesses in Pakistan's control and oversight mechanisms and inadequacy of rules and procedures which render procurement practices less transparent and more open to corruption with little or no accountability.

2.2.1 Procurement Planning and Project Appraisal Process

PPR (2004) do not cover procurement planning rules, instead the country's Budget Rules provide for them (GoP, 2009a). Procurement planning is done on the basis of certain need assessments and the ways in which to acquire that need, whereas budget allocations are done to meet that need (CPDI, 2011).

2.2.1.1 Project Funds Availability

On the announcement of Pakistan's annual development budget, the Planning Commission of Pakistan seeks the details and priorities of the projects (whether ongoing or new) to be funded by the allocated amount of development budget from the federal and provincial procurement organisations (GoP, 2009b). Thus, the priorities of the projects are determined according to the available size of the development budget instead of procurement plans being reflected in the budget (GoP, 2009b). The system of annual budgeting encourages the use of bribery to speed up the process in order to avoid potential delays in project funds availability (GoP/NAB, 2002). The availability and continuity of project finance is also necessary for its on time and within budget completion.

Therefore, the allocations for on-going projects are also adjusted to create space for new initiatives and fund releases are further slowed down to respond to the political pressures for new initiatives (Tahir, 2005).

2.2.1.2 Economic and Financial Appraisal of Projects:

It is the responsibility of the Planning Commission (PC) of Pakistan to plan, appraise, approve and monitor all development schemes in the country (Pasha et al., 2012). Financial appraisal of a project provides an estimation of cash inflows and outflows, whereas economic appraisal looks into the social benefits of the project (Pasha et al., 2012). The initiation and preparation of a project is the responsibility of procurement/sponsoring agencies at both, federal and provincial levels (Pasha et al., 2012). The institutional framework for pre-approval appraisal of all proposed schemes and respective approval ceilings is shown in Table 2.1.

Table 2-1: Sanctioning Authorities by Size of Project

Sanctioning Authorities by Size of Project		
Statutory Body	Limitation	Ceiling (PKR Mln)
Provincial Departmental Development Working Party (P-DDWP)	Projects Foreign Funded or requiring Foreign Exchange to be referred onwards	40 (In Punjab Rs. 200 million)
Provincial Development Working Party (PDWP)	Projects Foreign Funded or requiring Foreign Exchange to be referred onwards	50
Federal Departmental Development Working Party (F-DDWP)	Projects Foreign Funded or requiring Foreign Exchange to be referred onwards	60
Central Development Working Party (CDWP)	Federal and Special Area Projects	1,000
Concept Clearance Committee (CCC)	Provincial Projects	5,000
Economic Committee of the National Economic Council (ECNEC)	Provincial and Special Area Projects	>1,000
	Provincial Projects	>5000

Source: Planning and Development Division, Government of Pakistan

Appraisal methods have various shortcomings which include; over-estimation of the benefits and under-estimation of project costs to get it approved initially as a project with the least cost (Pasha et al., 2012) and then subsequent allocations are made. In Pakistan, the terminology of Public-Private-Partnership

(PPP) is used for such contractual arrangements which are made under the country's public procurement rules and differ from the traditional contracts (Pasha et al., 2012). The non-statutory frameworks for public procurement currently in force do not have a built-in "PPP Option Analysis" i.e. it is not mandatory to demonstrate that a PPP Option has been considered and found not feasible before approval of a project (GoP, 2009b; Pasha et al., 2012). The Planning Commission screens, reviews and proposes potential PPP projects from the Public Sector Development Programme (PSDP) (GoP, 2009b). Thus, the public procurement organisations have no thirst to apply their mind to the possibility of infrastructure service delivery through PPP arrangements.

2.2.2 Choice of Procurement Method

The choice of an appropriate procurement method determines whether the procurement process has been carried out to ensure economy, efficiency, transparency and accountability (CPDI, 2011). The standard procurement method for contracts value more than PKR 100,000 is competitive bidding; whereas direct purchase is permitted for contract value not exceeding PKR 25,000, and negotiated procedures are available for contract value not exceeding PKR 40,000 (ADB/OECD, 2006a). There are no rules to specify the applicability of these methods to the specific level of infrastructure procurement as the value limits can be exceeded by the government on the request of relevant procurement department (GoP, 2009a). Direct or sole contracting and negotiated procurement is permitted in the case of emergency or extreme urgency, however, the circumstances which constitute an emergency are not prescribed (GoP, 2009a).

2.2.3 Bidding Documents

In the absence of mandatory use of standard bidding documents developed by the PEC, procurement agencies have modified them according to their requirements, creating their own guidelines and manuals (ADB/OECD, 2006a; GoP, 2009a). This has reduced transparency and created non-uniformity of bidding documents at different levels. Also, the PEC bidding documents are limited to works and engineering services only and need to be updated

according to the International Federation of Consulting Engineers (FIDIC) conditions (GoP, 2009a). Where an infrastructure project is financed through international funding or a donor agency, PPRA requires use of bidding documents of a donor agency, but the use is not mandatory and depends on the procurement personnel's discretion (ADB/OECD, 2006a; GoP, 2009a).

2.2.4 Procurement Advertisement, Bidding Period and Bid Opening

The timely advertisement of procurement opportunities helps in reducing corruption by attracting a higher number of bidders thereby increasing the chances of receiving responsive bids while reducing the risk of bidders' collusion and opportunities for favouritism (de Jong et al., 2009; Søreide, 2002). According to PPR (2004), it is required, and in some cases mandatory, to advertise tender opportunities on the PPRA website or on the procurement agency's website, or in print media, or in all beyond certain contract value limits unless otherwise advertising risks the national security on sensitive purchases in, for example, the case of defence purchases (ADB/OECD, 2006a). Where it is required to publish tender opportunities in the media, the adverts are required to be printed in two national newspapers, one in Urdu and one in English (GoP, 2009a).

For national competitive bidding, a minimum period of 15 working days whereas for international competitive bidding, a minimum period of 30 working days is mandatory by PPR (2004) (ADB/OECD, 2006a). However, procuring authorities have the authority to determine the bidding period on the basis of the complex nature of the project (ADB/OECD, 2006a). This authority with procuring organisations may be abused in giving unrealistic bidding period deadlines to discourage more participation while the favourite bidder had prior notice to prepare a responsive bid.

Good procurement practices require bids opening at a designated time and place in the presence of all bidders or their proxies (ADB/OECD, 2006a). PPR (2004) require bids opening ideally in public or at least in the presence of bidders or their representatives on the day the tender period ends in order to avoid the disclosure of confidential inside information on the lowest bid, or any

alterations, manipulations, destruction or misplacement of tender documents at an early stage (ADB/OECD, 2006a). There are no rules and provisions by PPR (2004) on bid opening immediately after the end of the tendering period, which is potentially vulnerable to corruption (ADB/OECD, 2006b).

2.2.5 Prequalification, Qualification and Disqualification

Good practice requires pre-qualification based on transparent, well-defined and well-publicized guidelines (Transparency International, 2010). PPR (2004) provide detailed procedures of pre-qualification but no guidelines are established for clarity (GoP, 2009a). Federal public procurement organizations are also autonomous in the development of the conditions for pre-qualification (GoP, 2009a). Procurement agencies do not maintain an eligible contractors list but companies which are not registered with the PEC are barred from overall participation (GoP, 2009a). Traditionally pre-qualification is based on bidder's technical and financial capacity and past performance in doing similar projects (CPDI, 2011). However, this criteria is criticised on considering past-performance in similar projects which leads to favouritism and contractor's monopoly (CPDI, 2011).

Bid evaluation is considered to be the most difficult step to carry out in the procurement process and one of the easiest steps to manipulate for corrupt ends (CPDI, 2011). According to PPR (2004) the contract will be awarded to the 'lowest evaluated bid', unless the bid is in conflict with federal Government policies, laws, and regulations (ADB/OECD, 2006a). The lowest-bid wins criteria is criticised for inviting high competition and delivering low performance (Farooqui and Ahmed, 2008). This type of criteria pushes contractors to concentrate on cutting bid prices from all corners (Farooqui and Ahmed, 2008). The low-bidder as contractor mostly exhibits poor performance, particularly in terms of extraordinary claims and disputes, employing third-grade human resources and showing technical, managerial and financial incompetence on the project (Farooqui and Ahmed, 2008). Also, the bidders initially submit low bids but later-on, during the process compensate their cost through inflating variation orders (Farooqui and Ahmed, 2008).

It is mandatory for procurement authorities to include evaluation criteria in bidding documents (ADB/OECD, 2006a). The procurement agencies are at full liberty to develop evaluation criteria according to specific project needs and requirements (GoP, 2009a). Technically, companies from all around the world are allowed to compete without prejudice as long as they fulfil the evaluation criteria (GoP/PC, 2011b). However, public sector organizations or domestic bidders are given preference (GoP/PC, 2011b). These public organizations charge higher values and often sub-let the work to other contractors (GoP/PC, 2011b). A tender may be recalled in case none of the bids are appropriate, or too few appropriate bids are received (ADB/OECD, 2006a), however, the decision relies on the discretion of the procurement agency (ADB/OECD, 2006b).

PPR (2004) allow procurement agencies to decide the time period for bid evaluation (GoP, 2009a), however, this level of control can be manipulated for corrupt ends. The most likely outcome of this is a delayed bid evaluation period to discourage bidders or the extra time being given to a favoured bidder (GoP, 2009a). Moreover, PPR (2004) allows bidders to be disqualified for violations of procurement rules (ADB/OECD, 2006b) which may result in unfair elimination and abuse of power.

2.2.6 Bid Negotiations and Project Monitoring

According to PPR (2004) post-award financial negotiations are explicitly prohibited (ADB/OECD, 2006a). However, technical negotiations are allowed for adjustment in prices, particularly for large and complex infrastructure projects (ADB/OECD, 2006a). It is common to accept the technical design of the project based on line-drawings, cost estimates are based on the Schedule of Rates and Bills of Quantities according to rule of thumb with a view to revising and submitting bids subsequently (GoP/PC, 2011a). During bid negotiations, collusion and coercion may occur and bribes or kickbacks may be used to manipulate negotiations (Transparency International, 2010). The contract which was earlier won on the basis of having the lowest price may be renegotiated at this stage to readjust contract prices (Transparency International, 2010). Additional or modified clauses in the contract may be included, or other terms

may be disregarded completely by invoking new requirements during this period (Transparency International, 2010).

It is required to monitor contract administration and implementation in order to assist its effective implementation (Tahir, 2005). The present project monitoring system requires monthly reporting on project progress during the execution, project evaluation on its completion, and reporting on project performance (operation and maintenance) for five years after the completion of the project (Tahir, 2005). However, implementation to these requirements are not carried out necessarily and frequently (GoP, 2009a). Project evaluation and performance reports are rarely seen on and after completion of a project (GoP, 2009a). Moreover, collusion between project manager, contractors and consultants is also likely during the project construction phase as they are not given any incentives for early completion of the project (GoP/PC, 2011a).

2.3 Redress of Grievance/Complaint Mechanism

Availability of complaint mechanisms to report fraudulent, corrupt and unethical behaviour is essential in detecting and deterring corruption and to increase public trust in the fairness of procedures and institutions (ADB/OECD, 2006a). Such mechanisms should allow other bidders and the general public to verify the actions of procurement personnel as if they are in accordance with the prescribed rules and regulations (ADB/OECD, 2006a). In Pakistan, the mechanism for handling complaints by aggrieved bidders exists at both the administrative and judicial levels (ADB/OECD, 2006b). Both mechanisms have complementary functions and handle complaints related to pre-contract issues only (ADB/OECD, 2006b). For complaints or disputes post-contract award, arbitration under the Arbitration Act of 1940 is prescribed (ADB/OECD, 2006b).

2.3.1 Administrative Review Mechanism

The PPR (2004) do not provide any rules to guide the administrative review mechanism and formation of an administrative review committee (ADB/OECD, 2006b). Instead, procurement authorities establish their own procedures (GoP, 2009a). This requires initial complaints to be directed to procuring authority itself (GoP, 2009a). According to PPR (2004), only aggrieved bidders (not just

any citizen) may file a written complaint within 15 days of publishing a bidding report supported by sufficient evidence (ADB/OECD, 2006b). Usually, it is difficult for an aggrieved party to collect and verify the facts while considering the risks of lodging a complaint in given time (GoP, 2009a). In case an aggrieved bidder is not satisfied with the decision, he may go to court of law within 15 days of receiving the administrative review (ADB/OECD, 2006b). The administrative review covers only decisions made during the tendering process and therefore are supposed to correct errors only (ADB/OECD, 2006b). It does not cover corruption during either the procurement planning or delivery phase where no potential complainants are available (ADB/OECD, 2006b). Moreover, the review decisions do not cause any delays or halting of procurement procedures and no second level review is available other than the court of law (ADB/OECD, 2006b).

2.3.2 Judicial Review Mechanism

If the aggrieved bidder is not satisfied with the decision of the review panel, he may file an appeal in the civil court or in the Office of Ombudsman (ADB/OECD, 2006b). An administrative review is essential before going to the judicial review (GoP, 2009a). Judicial reviews cover such decisions which result from wilful misconduct and an administrative committee refuses to rectify (ADB/OECD, 2006b). However, there is no specified time limit for judicial complaints under PPR (2004) (GoP, 2009a).

Pakistan has three anti-corruption laws, namely; Pakistan Penal Code (PPC) 1860 (sections 160-165), Prevention of Corruption Act (PCA) 1947 and the NAB Ordinance 1999 (GoP/NAB, 2002). Sections 160-165 A of the PPC 1860 defines corruption as “illegal gratification” (GoP/NAB, 2002). The NAB Ordinance 1999 which considers “assets beyond known means as corruption” and certain categories of private sector corruption (wilful defaulters, etc.) in its purview (GoP/NAB, 2002).

Corruption in public infrastructure procurement is penalized under general criminal laws which include; provisions regarding corruption, fraud, conflict of interest, and other unethical behaviour (GoP, 2009a). The related provisions are

included in tender documents (GoP, 2009a). These laws look for individual responsibilities to abstain from corruption and provide consequences for those who are found guilty, however, various other corrupt practices like bribery through intermediaries and collusion, are not penalized in Pakistan (ADB/OECD, 2006b). No laws exist to terminate the contract won through corrupt practices or to hold contractors liable for damages or depriving them from economic benefits (ADB/OECD, 2006b).

Furthermore, disclosures of conflicts of interest and provisions for codes of conduct exist to mitigate against exerting undue influences on the procurement process by corporate suppliers beyond certain contract values (ADB/OECD, 2006b). Moreover, it is mandatory for bidders to sign “Integrity Pacts” as part of public procurement contracts for goods and services where the contract worth more than PKR 5 million for consultancy and PKR 50 million for construction works (ADB, 2009).

2.3.3 Audit System

The auditors and supervisory bodies assist in establishing an effective and efficient review mechanism to detect and deter corruption (ADB/OECD, 2006a). PPR (2004) do not provide explicit guidelines on procurement audits by specialized independent auditors (GoP, 2009a). Audits of procurement agencies are required by the Auditor General of Pakistan (AGP) and Chartered Accountants yearly or sometimes after six months (ADB/OECD, 2006b). Both, the external and internal audits of procurement organisations are largely limited to financial transactions only (ADB/OECD, 2006b). In order to cover up irregularities and deficiencies between reported and actual revenue and expenditure, there are strong perceptions that collusion between auditors and bureaucrats do exist (GoP/NAB, 2002). The technical expertise of auditors is perceived to be low, particularly in skills required to uncover corruption (GoP/NAB, 2002).

Although, the mechanisms for independent performance audits is available, it rarely takes place due to capacity issues (CPDI, 2011). Moreover, audit reports are presented to the President annually instead of presenting at the time when it

is actually ready (GoP, 2009a). This lowers the relevance and functional credibility of these reports (GoP, 2009a). The record of audit findings and observations have limited access and are not even available to the PPRA (CPDI, 2011). Although the Audit Rules and the NAB Ordinance and the Evidence Act require the preparation, maintenance and production of a full list of bidding documents, no explicit provisions are available to enforce the routine safe keeping of these documents (CPDI, 2011; GoP, 2009a).

2.3.4 Public Access to Information

Access to information or Right to Information (RTI) means that everyone should have right to access information and records held by or under the control of any public bodies or organisations that benefit from taxpayers' money (CPDI, 2009). Although there are some legislative arrangements for access to information in Pakistan, but the country still has a legacy of the British colonial regime in the form of the Official Secrets Act, 1923, which puts an extreme restriction on citizens' Right to Information (CPDI, 2009). In addition, Punjab Maintenance of Public Order, 1960, can be used to withhold information in the name of national security, national interest and privacy (CPDI, 2009). In 2002, Freedom of Information Ordinance was promulgated for transparency in governance (CPDI, 2009). The main criticism on this act was that an unreasonable amount of information was exempt from accessibility, in particular it's applicability is only to the Federal Government ministries, attached departments and agencies, boards, councils, courts, tribunals and the commission or authorities (CPDI, 2009).

With regard to public procurement, PPR (2004) allow public access to procurement information on very basic things, which includes information on initial procurement opportunities for submission of expression of interest, bids and proposals for all public procurements (CPDI, 2011). However, there is no system to provide information on the processes, outcomes, results, and performance of the procurement processes for the general public (ADB/OECD, 2006b; GoP, 2009a). There is no explicit information available for getting access to bidding documents/procurement record when needed for public inspection (CPDI, 2011). PPR (2004) allow public access to information on

awarded contracts but not regarding pre-qualification procedures or debarment (GoP, 2009a). Project Audit reports have limited access and are not available to the general public (ADB/OECD, 2006b). PPRA website publishes procurement opportunities of businesses at federal level, but does not publishes information on procurement plans or the results of contract awards (CPDI, 2011; GoP, 2009a).

2.4 Summary

The chapter presents an overview of public infrastructure procurement and regulatory framework in Pakistan while highlighting its weaknesses and loopholes. While the PPRA was primarily made to increase process transparency and accountability, there is no power or authority given to the PPRA to punish or investigate the matters of irregularities and corruption by procurement organisations. Also, there are problems of capacity with procurement and audit institutions to carry out procurement and performance audits. The PPRA mainly covers traditional procurement at federal level only and does not provide a comprehensive framework for PPP projects which are presently governed by the contract laws.

The most dominant procurement criterion in Pakistan is price based with almost no provisions to ensure work quality. Also, the process of project approvals involves 'executive discretion' at various levels and is 'over centralised'. This chapter also highlights the weaknesses in the national integrity system which help to conceal corruption and subsequently prevent the corrupt from being detected and punished. These systemic weaknesses provide an understanding of how corruption works in the country and elaborates the reasons for its existence during infrastructure procurement processes.

3 Infrastructure Procurement and Corruption

3.1 Introduction

This chapter outlines different forms of corruption in the infrastructure procurement process; examines the causes behind and offers strategies for detection, prevention, control and sanctioning of such corrupt behaviour within infrastructure procurement. It starts by defining infrastructure procurement and the theoretical paradigm underlying an act of corruption.

3.2 Defining Infrastructure Procurement

The term infrastructure refers to a wide variety of services, but is defined here as those services which are provided through physical infrastructure networks, specifically: transport network (e.g. roads, rail system, bridges and tunnels); energy provisions (e.g. through power generation); supply networks (e.g. dams, grid stations, etc.); telecommunication facilities, water supply and drainage networks and solid waste management system. These are the physical components which are required to enable, sustain or enhance living conditions of a society.

The term 'procurement' is used for all types of acquisitions of public goods and services (Søreide, 2002). Rose-Ackerman, (1999) divides procurement into four categories:

1. Purchases that require specialised research and development, such as newly designed military aircraft.
2. Purchases of complex, special purpose projects, such as dams or port facilities, that do not involve advances in technology, but require managerial and organisational skills.
3. Purchases of standard products sold in open markets, such as motor vehicles or medical supplies (off-the shelf purchase).
4. Customised versions of products otherwise available in open markets, such as special purpose computer systems or fleets of police cars.

Procurement procedures differ for all these four categories. The second purchase category which is relevant to this research study, International

Competitive Bidding (ICB) is the useful method of procurement (Søreide, 2002). Public Procurement of infrastructure essentially includes the purchase of goods and services in three areas;

- 1- Contracts for Construction Work
- 2- Contracts for Purchase of Goods and Equipment
- 3- Hiring of Consultants for Design and Construction Supervision

3.2.1 Traditional Infrastructure Procurement

In traditional infrastructure procurement:

“usually the government [sic] specifies the quantity and quality of the service, while the infrastructure is constructed by private companies to whom the construction is typically awarded through tender. Once the construction is finished, the asset is transferred to and operated by government” (Burger and Hawkesworth, 2011:94).

3.2.2 Public-Private-Partnership (PPP) for Infrastructure Procurement

Public Private Partnership (PPP) for infrastructure procurement is:

” an agreement between the government and one or more private partners (which may include the operators and the financiers) according to which the private partners deliver the service in such a manner that the service delivery objectives of the government are aligned with the profit objectives of the private partners and where the effectiveness of the alignment depends on a sufficient transfer of risk to the private partners”(OECD, 2008:21).

In such an agreement, the government still specifies the quantity and quality of services it requires from the private sector, however, “the key distinction is the allocation of risk and the role of risk as an efficiency driver”(Burger and Hawkesworth, 2011:95). Similar risks are also present in traditionally procured projects, however their transfer to a private party is very limited and usually exists only during the project construction phase in the form of penalties for late project delivery. However, the PPP projects not only include risk sharing during

the construction phase, but also during the operational stage in the form of one single contract.

3.3 Defining Corruption

Interestingly there is no current consensus in the literature regarding the definition of corruption. According to Tanzi, (1998:564), “while it may be difficult to describe, corruption is generally not difficult to recognise when observed.” In economic terms, Werlin, (1973) defines corruption as the use of public office for private needs. For corruption in the public sector, Blackburn et al., (2004) defines it as exploitation of an official position to make illegal or unauthorised personal gain. Shleifer and Vishny, (1993) define government corruption as the sale of state assets by civil servants for personal gains. Transparency International defines corruption as the abuse of entrusted power for private gain (Stansbury, 2005). An alternate definition defines corruption as “non discrimination in the exercise of public authority” (Kurer, 2005; Rothstein and Teorell, 2008). According to Jain, (2001:73) corruption is an act of using public power for private gain “in a manner that contravenes the rules of the game”. All these definitions have the attribute of using power or authority for personal gain. Incorporating this attribute of defining corruption, the definition of corruption utilised in this study is “ the misuse/abuse of entrusted power for personal gain either at one’s own instigation or in response to inducements” (Cavill and Sohail, 2007a:8).

Other ways of defining corruption include: the scale of corruption (i.e. petty or grand corruption); whether it is administrative or state corruption or by the specific type of corrupt action i.e. bribes, fraud, embezzlement, extortion or favouritism (Andvig et al., 2000).

3.4 Theoretical Paradigm of an Act of Corruption –The Principal - Agent Model

Corruption can be analysed through different analytical frameworks employed in different disciplines. The most established classic theory of understanding acts of corruption within both political science and economics is the ‘principal-agent model’ (Aidt, 2003; Teorell, 2007) which became popular after the work of Susan Rose-Ackerman, (1978) and Robert Klitgaard, (1988). This approach

states that corruption should be considered as criminal behaviour by an entrusted agent (civil servants who are assumed to prefer corrupt transactions to such an extent that the benefits of such transactions prevail the costs) who acts on behalf of a honest/benevolent principal (cabinet ministers who are typically assumed to represent the public interest). This modality assumes: 1) that a conflict of interest exists between ‘principals’ and ‘agents’, and 2) that agents possess more information than principals resulting in information asymmetry between the principals and agents (Klitgaard, 1988; Williams, 1999). This information asymmetry may exist when agents are not willing to disclose the specific information to the principals or have private motivations other than performing the delegated task on behalf of the principal. Thereby, “corruption occurs when an agent betrays the principal’s interest in the pursuit of his or her own self-interest” (Persson et al., 2010:4).

Another less classical perspective refers to political corruption; where rulers are considered agents and citizens as principals (Adsera et al., 2003; Besley, 2007; Persson and Tabellini, 2002), which primarily requires to control ruling elite instead of civil servants/bureaucrats (Persson et al., 2010). This approach considers ‘the people - citizens’ as the honest ‘principal’ and political leaders as corrupt ‘agents’. Ultimately, this less classical model appears to be similar to the classical principal-agent model in all terms, but with an exception, i.e. contrary to assuming honest principals ‘on the top’, it takes their presence ‘on the bottom’ in the form of ordinary citizens (Besley, 2007; Myerson, 1993; Persson and Tabellini, 2002).

According to the principal-agent model, the problem of corruption exists exclusively at the agent’s level only, while principals (government bodies/political leaders or citizens/civil society) take all the responsibility of controlling corruption by monitoring agents (civil servants/bureaucrats or ruling elite/political leaders) (Becker and Stigler, 1974; Rose-Ackerman, 1978; Klitgaard, 1988; Andvig and Fjeldstad, 2001; Mungiu-Pippidi, 2006). In order to reduce corruption, this model requires the presence of at least one group of actors who are willing to act like ‘principals’ to implement the effective monitoring and punishment system (Klitgaard, 1988). The principal would have

to negatively affect the agent's motivations, who engages in the act of corruption, to such a point where the fear of being caught is greater than the motivation to engage in corruption. This could be done by enhancing the level of accountability in the system while limiting the level of agent's discretion and monopoly (Klitgaard, 1988).

Rivals of this principal- agent model argue that there are issues with some of the propositions. For example, if the supposed principals are not 'principled' and do not act in the interest of the public good, resulting in the unavailability of the actor/ player willing to monitor and punish corrupt behaviour (Andvig and Fjeldstad, 2001). In such a situation, monitoring devices and punishment systems become largely ineffective as there will be no actors willing to hold corrupt officials accountable (Persson et al., 2013, 2010). Robert Klitgaard, (2012:8) argues this point further by saying that, "there is no shortage of sincere opponents of corruption, even in highly corrupt countries", thus, criticising the unavailability of 'principled' principals. Although, this is not the intention, nor the scope of this research work to approve or disapprove the principal-agency model for explaining the corrupt actions, but, this is considered as a useful theoretical hinge for this research study in understanding the phenomenon of corruption and formulating strategies to control its occurrence.

3.5 Corruption in Infrastructure Procurement

Public procurement of infrastructure projects, procured through either traditional or PPP route of procurement, can be described as a process flow:

“starting with procurement planning and proceeding in sequence to product design, [tender] advertising, invitation to bid, prequalification [of interested bidders], bid evaluation (broken down further into technical and financial evaluation), post-qualification, contract award [to winning bidder] and contract implementation [during construction and operational stage of the project]” (OECD, 2007a:19).

Each link in this process chain is potentially vulnerable to corruption in some form or another (OECD, 2007a). For an act of corruption to occur, it must be

intentional, in conflict with the public service performance objectives, and must have recognizable benefits out of it (Søreide, 2002).

Corrupt actions, for instance, bribes, speed money or embezzlement, fraud, extortion and favouritism in the form of cronyism and nepotism (Andvig et al., 2000; Cavill and Sohail, 2007a), are categorised as criminal offences in most jurisdictions around the globe (Stansbury, 2005). All such practices show some type of breaches of norms of impartiality (Rothstein and Teorell, 2008). The infrastructure industry has an international reputation for corruption with public procurements being most prone to corruption (Søreide, 2002). The entire infrastructure industry is tainted with, most, if not all of the above mentioned corrupt practices (Andvig et al., 2000; Cavill and Sohail, 2007a; Søreide, 2002; Stansbury, 2005); however, the “primary types are: kickbacks and bribery, front companies, bid rigging and collusion, fraud, and conflicts of interest” (de Jong et al., 2009:107).

The major forms of corruption in procurement of infrastructure projects include:

1. Petty Corruption

Petty Corruption in infrastructure procurement usually take place during the lateral stages of a project life cycle and may include the form of fees paid to secure services e.g. provision of electricity or access to clean water (Cavill and Sohail, 2007a); and for a company, “a small fee to get an invoice paid, to certify completion of the works or obtaining customs clearance for equipment and materials” (Hawkins, 2013:5). This type of corruption involves small sums of money across a large number of individuals (Uslaner, 2009).

2. Grand Corruption

Grand corruption during infrastructure procurement usually take place during the early stages of the project life cycle, especially during the development of government policies (Butterworth and de la Harpe, 2009; Butterworth and Harpe, 2009; Cavill and Sohail, 2007a). “High-level government officials – represented by legislators or elected public officials – may institute or manipulate policy in favour of particular interest groups (representing private

sector interests and entities or individual units of public bureaucracy competing for higher budgets) in exchange for rents or side payments” (Persson et al., 2010:4). Corruption during this stage may take place in the identification and selection of high value uneconomical projects, selecting project designs favouring particular firms and contracts being awarded to favoured bidders, allowing extortion and political patronage (Cavill and Sohail, 2007a; Hawkins, 2013). This form of corruption involves a relatively small number of individuals which acquire large sums of money and abuse their discretionary powers (Butterworth and de la Harpe, 2009; Uslander, 2009).

3.5.1 Vulnerability to Corruption w.r.t. Route of Procurement (Traditional and PPP)

Traditionally, publicly funded infrastructure projects have been criticised around the world for their vulnerability to corruption due to the involvement of high discretionary powers with government officials during the decision making process. On the other hand, the alternate route of infrastructure procurement, through Public-Private-Partnership (PPP), has long been vowed for its extra benefits of providing lesser opportunities of corruption by sharing the responsibilities of the decision making process between government officials and their private partners. This observation was supported by highlighting the lack of PPP projects in countries with more corruption and less effective legal system (Hammami et al., 2006). This implies that corrupt deals do not find PPP projects as easy within which to determine the desired corrupt outcome (Klitgaard, 2012).

However, Klitgaard, (2012:7) argues that “formal economic models of PPPs do not address what to do if both partners [public officials and private contractors] are corrupting the partnership [through collusion]”. The opponents of PPP also find such deals inadequate to protect ‘public interests’ (Minow, 2003) due to the vulnerability of decision-makers being captured by ‘private interests’ (Martimort and Pouyet, 2008). According to Ehrhardt et al., (2009:63), “Corruption during the procurement process for PPP transactions resembles corruption in procurement of publicly funded capital works projects”. According to Klitgaard, (2012) PPPs are particularly vulnerable to

opportunities for “grand corruption” due to involvement of high value and unique transactions (Klitgaard, 2012). Such high value and unique transactions are difficult to price competitively, thus providing opportunities for public and private parties to inflate overall contract values, or to create special purpose deals or extra unneeded projects, making monitoring difficult which will result in loss not only in terms of bribes paid but a total waste of public resources spent on the project overall (Rose-Ackerman and Truex, 2012a).

3.5.2 Demand and Supply of Corruption

Identifying different forms of corruption is useful in progressing knowledge of our theoretical understanding of corruption (Gerring, 1999). Recognising various types of corruption also helps in better understanding of the causes behind different forms of corruption and whether they stem from the same causes or not. Corruption in infrastructure procurement can take different forms e.g. bribery, kickbacks or extortion, fraud, embezzlement, nepotism and cronyism, etc. depending on who is involved.

Kickbacks (extortion) are demanded by a person in a position of power and authority in return of giving a favourable decision (de Jong et al., 2009). On the other hand, bribes are offered by the person seeking for that favourable decision from the person in power, hence occur in the opposite direction to kickbacks (de Jong et al., 2009). Also, payment of a bribe is often, if not always, is considered an institutional act, while the receipt of the bribe is often an act of an individual for personal benefit (ADB/OECD, 2006a).

1. Demand Side Corruption by Government Officials or Project Owner/Staff

Government/public officials and parliamentarians/elected politicians can divert project funds to enrich themselves (Rose-Ackerman, 1999) in return for kickbacks and bribes for: “the award of a contract, the payment of invoices, or the approval of contract amendments or other services” (de Jong et al., 2009:107) and/or “providing key information to facilitate due or undue assignment of a contract, turning a blind eye to collusive tendering patterns,

releasing information that facilitate collusion etc.” (OECD, 2007a:52). Kickbacks can be sought by multiple stakeholders summarised in the following:

“owners from engineers or constructors, by engineers from potential subcontractors, by constructors from potential subcontractors or material suppliers, by material or equipment suppliers from potential subcontractors, or by regulatory/permitting agencies from engineers, constructors, materials or equipment suppliers” (de Jong et al., 2009:107).

2. Supply Side Corruption by Contractors

Those who pay bribes may include contractors, or the people who work for them as their employees; their representatives or associates may be working as their intermediary agents; companies working with them in joint ventures or consortium partners, sub-contractors, consultants, or suppliers. Those who pay bribes generally expect something in return for the bribe and hopes the outcomes will be better than they could be without paying the bribe (OECD, 2007a). Bribes are used to influence the decision making of a tendering process; the design of a project; for obtaining inside information on tender specifications or the prices submitted by other competitors; or to get institutional support for their project from politicians, high public officials, diplomats or bankers. A briber may also expect additional or unjustified compensation in return for a bribe or may use bribes to hide poor quality work.

3.5.3 Concealment of Corruption

It is difficult to identify corruption in infrastructure projects as it is rarely the act of an individual (OECD, 2007a) and is done with secrecy, away from the public eye and records (Tabish and Jha, 2012). There are no traces of cash payments for auditors to investigate. International bank transfers are also difficult to trace as in some countries it is difficult to establish the ownership of bank accounts or assets (de Jong et al., 2009). Front companies may be part of a legitimate joint venture formed for a project developed by high ranking government officials (de Jong et al., 2009).

The same officials may be part of the team who is awarding the contract to the front company (de Jong et al., 2009). The intermediary may also be in charge of kickbacks or facilitating bribes (de Jong et al., 2009) which may be concealed in the ambiguity of a formal contract by involving intermediary in key tasks (OECD, 2007a).

Another way to hide corruption is through sub-contract arrangements (OECD, 2007a). The sub-contractor may never provide the agreed services or provide them at very low prices while paying the balance price as bribe to the relevant party (Celentani and Ganuza, 2002; OECD, 2007a). The sub-contract may also be given to the front company owned by the person receiving the bribe (OECD, 2007a). In such cases, the contractor might not actually need the goods and services provided by that sub-contractor; or these goods and services may be paid for inflated values; or there might be no exchange at all, and the bribe is organised through false billing (OECD, 2007a). Similarly, contractors, being part of a multinational group, may arrange bribes through a subsidiary of a country least likely to identify the act (OECD, 2007a). Another way is through joint venture arrangements with a third party close to, or working as a front company for the bribe where “the compensation of the participation of the joint venture includes the payment of a commission” (OECD, 2007a:49).

3.6 Causes of Corruption in Infrastructure Procurement

There are many sources contributing to corruption in public infrastructure procurement. Public choice theorists suggest that individuals are rationally calculating persons who decide to become part of corrupt actions when the expected advantages of acting corruptly overshadow its expected disadvantages e.g. possibility of being caught and punished (Nordin et al., 2012). The perceptions of individuals who get involve in corrupt activities are developed by the expected level of corruption and the authority’s level of tolerance towards corrupt behaviour (Cabelkova, 2001).

With respect to the causes of corruption, Bardhan and Mookherjee, (2006) presented the standard economic approach based on incentives and punishments for corrupt actions following the analytical framework presented by (Becker, 1968).

Following this approach and linking broadly all types of literature on the causes of corruption, in particular that provided by, Aidt, (2011), following Jain, (2001); Rose-Ackerman, (1999); Tanzi, (1998) highlights three pre-requisites or conditions necessary for the incidence of corruption in public procurements as given below:

- 1- Discretionary power: the relevant public officials (bureaucrats, politicians, etc.) must possess the authority to design or administer regulations and policies in a discretionary manner.
- 2- Economic rents: the discretionary power must allow extraction of (existing) rents or creations of rents that can be extracted.
- 3- Weak institutions: incentives embodied in political, administrative and legal institutions must be such that public officials are left with an incentive to exploit their discretionary power to extract or create rents.

This implies that public officials (bureaucrats and politicians etc.) have discretionary power which they use to extract economic benefits in anticipation of an adequately low probability of being caught and punished due to a weak institutional structure. The first two pre-requisites provided by this approach determine the benefits whereas the third one determines the cost of being involved in an act of corruption. Studies using this approach focus on economic conditions and policies in a country that influence the cost and/or benefit of being involved in corrupt activities.

3.6.1 Existence of Discretionary Power and Opportunities of Seeking Economic Rents

Discretion is key to corruption (Klitgaard, 1988). UNDP, (2008) suggested the following formula to describe corruption:

$$C \text{ (corruption)} = M \text{ (monopoly)} + D \text{ (discretion)} - A \text{ (accountability)} - I \text{ (integrity)} - T \text{ (transparency)}.$$

This formula states that in order for corruption to exist, there needs to be a monopoly of power with government officials over goods or services that others need, with discretion to decide how much anyone should get, without

accountability, integrity and transparency. This shows that corrupt opportunities during infrastructure procurement arise from discretionary power with procurement personnel which may be deliberately created by exploiting the complexities of the process, nature and technicalities of works and services. Such opportunities particularly increase in the absence of any or adequate prior rules and procedures, thereby providing great discretion and vast opportunities to make personal choices (Shihata, 1997). The person in the position of power may choose to violate pre-established rules or may apply them selectively for his benefit and of those who pay him for the favour (Shihata, 1997).

Further to that, the nature of infrastructure projects and the manner in which they are operated, facilitates corruption (Transparency International, 2006). In the following is a discussion of the different features of infrastructure projects described by researchers which make them particularly more vulnerable to corruption by exploiting discretionary powers in anticipation of receiving economic rents.

1. Size of the Project

The scale of infrastructure projects are usually very large and cost significant amounts of money. Bribes are often paid as a percentage of the total sum of the project value, hence the more money a project costs the more reasons for people to demand or pay bribes (Moody-Stuart, 1997a).

2. Uniqueness of the Project

Infrastructure projects are unique and vary in content and size. Also, the rates for labour, materials and equipment vary according to current market demand. Consequently, it becomes difficult to compare their costs and makes it easier to inflate costs and provides opportunities of corruption in the form of bribes (Stansbury, 2005).

3. Complexity of the Project

Infrastructure projects are usually complex in nature. This complex nature often results in uncertain inter-relationships between the various parties involved and the events happening. Often people working on a project might not actually know or disagree on the reason why something went wrong, or why its costs

were higher than expected. In such situations, participants can easily blame each other for problems and can claim unjustified payments for these problems (Transparency International, 2006).

4. The Number of Contractual Links

Infrastructure projects normally have a number of contracts that link a large number of participants together through complex contractual arrangements. Each contract has its own documentation and related risks due to inherent ambiguities and obscurity involved in the bidding process providing more opportunities for discretion and thus to corruption (Compte et al., 2005).

5. Diversity of Skills Involved

Infrastructure projects involve people from diverse backgrounds, not only in terms of different professions and trades but also in terms of different specialist contractors. This diversity results in varied standards of qualifications, integrity and oversight (Transparency International, 2006).

6. Concealed Nature of Construction Work

Construction work in infrastructure projects, like any other construction work is being concealed by other construction components of the project. This results in dependence on the individuals who are responsible to certify the work i.e. to see if it has been completed according to the specifications *before* it is concealed. Every item of work provides an opportunity to demand bribes in return for certifying exaggerated, substandard or defective work, or certifying time extension to complete work, or making payments more quickly or paying for inflated claims (Stansbury, 2005).

7. Government Involvement

The level of government involvement in infrastructure projects is significant because these projects are usually owned by the government. Large projects also need government approvals even if they are PPP projects and financed by the private sector. The discretionary power of government officials, in the presence of a complex structural and financial nature of the project, results in large bribes being extracted by government officials (Stansbury, 2005; Transparency International, 2006).

8. Lack of Frequency of Projects

Major projects arrive at irregular intervals and are less frequent, thus creating pressure to win new contractors for survival and profitability of contractors. This provides reasons for contractors to pay bribes for their award (Stansbury, 2005).

3.6.2 Weaknesses in the Regulatory and Governing System

The deficiencies and weaknesses in governing systems may particularly trigger the risk of corruption for projects of a certain size, type and in certain markets by specific procurement entities (Hawkins, 2013; Shihata, 1997). The lack of transparency in rules, regulations, and procedures provide ample opportunities of corruption (Tanzi, 1998). It is possible that rules are written in a confusing way, with possible ambiguities regarding important aspects, thus leaving fertile ground for varying interpretations (Tanzi, 1998). Mostly documents specifying rules are not open to public access or the rules are changed without being properly publicised (Tanzi, 1998).

The existence of rules and regulations contributes to the monopoly of power of government officials who must be contacted to authorise or inspect the activities (Tanzi, 1998). These public officials may use their public position to extract bribes from those who need or want to avoid delays in obtaining authorisations or approvals or permits (Tanzi, 1998). The bribers may approach government officials and ask them to bend the rules or even to break the laws to avoid the cost imposed by the fulfilment of rules or to obtain other attached benefits (Tanzi, 1998). They may also lobby the law enforcing processes in order to buy favourable interpretations of the law (Melgar et al., 2009). Corruption then becomes an obvious concern as procurement agencies may knowingly use and abuse the regulatory diversity and multiplicity of rules.

Asymmetric information and costly institutional structures may also be used to extract bribes. Government officials may use the technical skills they hold to exploit the information asymmetry using their official position (OECD, 2007a). The expertise knowledge of procurement rules and regulations, urges an official to get involve in corrupt acts that he/she believes are not easy to uncover.

In doing so, the official may also be aware of the limited knowledge with the administration about the exact cost or precise technicalities of the project due to asymmetric information of the rules. The official may also use his discretionary power while applying procurement rules, knowing the procurement body has limited knowledge to verify the application of these rules and regulation. In addition, the level of penalties being enforced for violations, the likelihood of being caught and prosecuted, and the severity of punishment if convicted, all affect the probability that a criminal or illegal/corrupt act would take place (Becker, 1968; Melgar et al., 2009).

3.7 Mitigation Strategies to Control Corruption in Infrastructure Procurement

Corruption in infrastructure procurement is likely to result in higher project costs and lower quality, thus directly harming the end users of the facilities. It can also lead to unsuitable, defective, and dangerous infrastructure (Hawkins, 2013). Though corruption cannot be eliminated completely, it can be managed to a great extent. In order to develop anti-corruption strategies, most of the scholars like Andvig and Fjeldstad, (2001); Cavill and Sohail, (2007a, 2007b); Doig and Riley, (1998); Ivanov, (2007); Johnston, (2005); Lawson, (2009) and the organizations like United Nations Development Programme (UNDP), World Bank (WB), Asian Development Bank (ADB), International Monetary Fund (IMF), Department of International Development (DFID), UK, have followed the ‘Principal-Agent’ model. According to this approach, as described by Klitgaard, (1988); Rose-Ackerman, (1978); Williams, (1999):

- a. there is a conflict of interest between the principals (politicians/citizens who represent the public interest) and agents (bureaucracy/politicians who are seemingly involved in corrupt transactions as the benefits of such deals outweigh the costs)
- b. there is an information asymmetry between these two actors where agents hold more information than principals.

This implies, corruption occurs when principals delegate authority to agents for the performance of some government tasks and the agent betrays the principal’s interests in order to achieve his/her own self-interests.

The agents exploit the information asymmetry between the two groups of actors which they hold due to delegated authority. Thus, the principal-agent model suggests that only the principal will take on the role of controlling corruption (Andvig and Fjeldstad, 2001; Mungiu-Pippidi, 2006) using the control instruments that decreases the level of an agent's discretion by limiting his/her monopoly and increasing the level of accountability in the system (Klitgaard, 1988).

Zhou, (1998) citing Zou, (2006) discussed how the strategy to control corruption should be comprehensive and consist of preventive measures with relief and warning, combined with sanctioning of corrupt behaviour through penalties and prosecution upon the breach of the rules and regulations; and education of staff regarding their duties and reputation. A clear and comprehensive regulatory framework for the integrity of the procurement process and personnel is a fundamental prerequisite in the effort to curb corruption in public procurement (ADB/OECD, 2006a). Hence, a “holistic anti-corruption” strategy has been prescribed to reduce the discretion and monopoly of public officials while increasing their accountability and incentives in the form of high salaries; thereby increasing the chances of corruption being detected and those involved in such corrupt deals being prosecuted and punished; as well as encouraging more transparency of government decision making while increasing the public oversight through independent media and civil society watchdogs (Galtung, 1998; Langseth et al., 1999; Pope, 2000; UNDP, 2008; World Bank, 2000).

Table 3.1. shows the risk of corruption and mitigation strategies based on the approach of project life cycle. All mitigation strategies shown in Table 3.1 are based on the studies of OECD, (2005, 2006, 2007a, 2007b); Transparency International, (2006); Stansbury, (2005, 2008); and Cavill and Sohail, (2007a). A detail discussion on all these corruption control mechanisms is given in the following sections.

Table 3-1: Corruption Risk and Mitigation Measures over the Project Life Cycle

Corruption Risks and Mitigation Strategies at Each Stage of Infrastructure Procurement Process

(OECD, 2005, 2006, 2007a, 2007b; Transparency International, 2006; Stansbury, 2005, 2008; Cavill and Sohail, 2007a)

Stage of the Procurement Process		Examples of Corruption Risks	Mitigation Strategies/Good Practices
Procurement Planning/ Pre-Bidding	Needs assessment, planning and budgeting	<ul style="list-style-type: none"> • No formal procedures adopted for appraising and prioritising infrastructure projects. • Failure to budget realistically i.e. low estimation of costs to get projects with low returns approved thus introducing inaccurate policy requirements or high estimates of cost to provide an opportunity to divert funds. • Procurements not aligned with the overall investment decision-making process in departments. • Interference of high-level officials in the decision to procure thus conflicts of interest are left unmanaged. • Unclear overlapping department roles and functions at headquarters and sub-national levels causing confusion which forum to be used. • Demand is induced so that a particular company can make a deal but the purchase is of little or no value to society resulting in unnecessary project. • The investment is economically unjustified or environmentally damaging. • Budget for a contract with a “certain” prearranged contractor or informal agreement on contract. • Political influence to favour large capital projects 	<ul style="list-style-type: none"> • Annual procurement plans may be developed and publicised on websites and newspapers so as to inform providers of forthcoming procurement opportunities. • Objective reviews of national development and sector plans should help identify the balance between investment in capital projects and rehabilitation and maintenance schemes. • Use sector plans to identify the balance between large and small projects, and maintenance. • Providing the opportunity and the resources to parliament to examine fiscal reports on public procurement. • Making fiscal reports on public procurement publicly available, for example, on the Internet for transparency. • Promoting an understanding of the budget process by civil society organisations and the wider public. • Establish clear mechanism for systemic prioritisation and appraisal of infrastructure projects. • Select projects from national, local or sector plans prioritized according to need. • Community groups can be involved in prioritising small-scale infrastructure programmes. • Training staff on corruption or providing opportunities for

Stage of the Procurement Process		Examples of Corruption Risks	Mitigation Strategies/Good Practices
--	--	<p>such as highways and hydro-electric schemes over small-scale projects or maintenance schemes.</p> <ul style="list-style-type: none"> • Large discretionary funding providing discretionary decision-making opportunities. • Lack of clarity of rules and regulations in procurement, quality control and financial control resulting in manipulations. • Land use to favour particular bidder. 	<p>ethical education.</p> <ul style="list-style-type: none"> • Donors can work with government partners for strong coordinated action to persuade them to investigate allegations of corruption in donor projects.
Procurement Planning/ Pre-Bidding	Definition of requirements	<ul style="list-style-type: none"> • Politicisation of social and environmental impacts. • Social and environmental impact assessments that deliberately distort compensation for project-affected people. • Inadequate or no site surveys exaggerating the risks to suit a design specification. • "Tailored technical specifications to suit a particular firm." • Technical specifications too vague or not based on performance requirements. • Inadequate or incomplete designs resulting in over-designed and overpriced projects. • No strategy for operations and maintenance. • Poor cost estimations for lateral benefits. • Bidder selection and award criteria not defined clearly and objectively. 	<ul style="list-style-type: none"> • Use knowledge of prior procurements of a similar nature, for example through a database or data mining. • Making reference to established market prices or calculating the cost based on detailed market research. • Engaging with a representative group of suppliers to that market early in the process. • Building the capacity of the procuring entities to understand and apply the policy and regulatory framework and to ensure that designs are completed and site surveys are undertaken. • Develop ICT systems that can gather and analyse cost information to help improve estimations. • Infrastructure advisors can work with procuring entities to adapt construction standards to identify areas at risk of over-specification or design. • Ensure operations

Stage of the Procurement Process		Examples of Corruption Risks	Mitigation Strategies/Good Practices
--	--	<ul style="list-style-type: none"> • Bidder selection and award criteria not established and announced in advance of the closing of the bid. • Unqualified companies being licensed, for example through the provision of fraudulent tests or quality assurance certificates. • Goods or services that are needed are overestimated to favour a particular provider. 	
Procurement Planning/ Pre-Bidding	Choice of procurement procedure	<ul style="list-style-type: none"> • Lack of procurement strategy for the use of non-competitive procedures based on the value and complexity of the procurement resulting in inconsistent procurement practices. • Lack of transparency and clarity in procurement procedures. • Abuse of non-competitive procedures on the basis of legal exceptions through: <ul style="list-style-type: none"> a) Contract splitting on the basis of low monetary value contracts; b) Abuse of extreme urgency; c) Abuse of other exceptions based on a technicality or exclusive rights, etc; d) Untested continuation of existing contracts; e) Receiving an insufficient number of responsive bids by staging a deliberate failure of tender. 	<ul style="list-style-type: none"> • Define severe conditions for declaring a tender failure. • Verify the justification for using direct procedures by the Supreme Audit office. • Define specific reporting requirements (e.g. impossibility to have follow on contracting for contracts of low value)

Stage of the Procurement Process		Examples of Corruption Risks	Mitigation Strategies/Good Practices
Tendering	Invitation to bid, bid preparation & bid opening	<ul style="list-style-type: none"> • Information on the procurement opportunity not provided in a consistent manner. • Absence of public notice for the invitation to bid. • Rejection of potential winners or good bidders during pre-qualification for no or some artificial reason to favour particular bidder. • Providing a time frame for bid submission that is not sufficient for ensuring a level playing field and is not consistently applied for all bidders, for example, sensitive or non-public information disclosed earlier for a specific bidder. • Bid rigging/illegal price fixing/collusive bidding/contractors' pooling to submit a bid higher than the market value. • Bids may not be publicly opened, or their content may be subject to manipulation. • Additional fictitious bidders or ones unlikely to submit competitive bids are selected to show competitive process. • The evaluation 	<ul style="list-style-type: none"> • The proportionality principle requires that information be made public according to the size of contracts above a certain threshold and may be introduced as a mandatory requirement. • Allow sufficient time to prepare bids. • Use framework contracts to reduce the incentive to operate a cartel. • Standard/template bid documents, standard sets of clauses and conditions, standard procurement guidelines can be developed to provide clear documentation on procurement opportunity. • Introduce laws and criminal penalties for contractors and officials to eliminate and prevent involvement in bid rigging and disclosure of confidential inside information. • Develop E-procurement as means of increasing transparency in the procurement process by disclosing information relating to the tender process on a secure website. • The criteria and relative weightings, if appropriate, must be published in a timely manner so that bidders are aware of them when preparing their bids. • Opening of the bids in public or at least in the presence of all bidders or their proxies, especially for negotiated/direct procedures, supported by double signatures and ideally should take place immediately after the tender period.

Stage of the Procurement Process		Examples of Corruption Risks	Mitigation Strategies/Good Practices
Tendering	Contract Award	<ul style="list-style-type: none"> • "Conflict of interest and corruption in the evaluation process (e.g. familiarity with bidders over the years, personal interests such as gifts or additional/secondary employment)." • Conflict of interest and corruption in the approval process i.e. no effective separation of financial, contractual and project authorities in delegation of authority structure. • The absence of objective decision criteria or the inadequate weighting of the various criteria to favour a particular bidder. • Single-source and repeat contracts awarded as a result of an official's personal preferences. • Disqualifying all lower priced bidders on the basis of spurious technical infringements. • Long period of time between notification of the preferred bidder and contract award. • Award to an initial low bid price with "hidden" possibilities to expand the contract at a later stage to recover the economies for the vendor. • Lack of access to records on the bid evaluation and approval procedure. 	<ul style="list-style-type: none"> • Introduce eligible contractors' list based on the competence, past performance and reputation for integrity. Make this list publicly available and update regularly. • Evaluation points may be allocated for the past performance and reputation of <ul style="list-style-type: none"> engineering consultants appointed to design or supervise the construction work as it is they who control most of the avenues through which corruption occurs. • Use a post-qualification process whereby bidders are initially short-listed based on price. • Communicating contract award results to all participants by providing the name of successful participant and the reasons for the rejection of the offer to the unsuccessful bidder. • The publication of an advance contract award notice in order to provide an opportunity for potential bidders to participate in the procedure in cases where there is not absolute certainty that only one firm has the ability to perform the contract. • Ensure there is a complaint handling mechanism to allow contractors and community members to anonymously report fraud, collusion, corruption and intimidation. • Provide bidders with sufficient time to challenge the decision before the contract starts. A standstill period is given between the date of notifying bidders of their contract award decision and the date they may enter into the contract. • Signing off Integrity Pacts as part of contract by all bidding

Stage of the Procurement Process		Examples of Corruption Risks	Mitigation Strategies/Good Practices
			<p>participants including contractors and consultants.</p> <ul style="list-style-type: none"> Consider training community observers to monitor the procurement process particularly the tender evaluation.
Payments and Contract Management/ Post Bidding	Payments and Contract management	<ul style="list-style-type: none"> Certification of the execution of the works may not correspond with the real supply. Subcontractors and partners are chosen in a non-transparent way, or not kept accountable. Large number of contract renegotiations. Manipulation of the bills of quantities Failure to monitor the performance of contractors, in particular, lack of supervision (or collusion between the supervisor and the contractor) over the quality and timing of the process that results in: <ul style="list-style-type: none"> a) Substantial change in contract conditions and scope of work to allow more time, more work and higher prices for the bidder through variations resulting in a contract rarely completed on budget. b) Product substitution or sub-standard work or service not meeting contract specifications; c) Theft of new assets before delivery to end-user or before being recorded in the asset register. Deficient separation of duties and/or lack of supervision of public officials leading to: <ul style="list-style-type: none"> a) False accounting and cost misallocation or cost migration between contracts; 	<ul style="list-style-type: none"> The bid notice may include details on the way the contract is to be managed as well as the plan and method for payment. An internal risk matrix for the administration helps ensure the involvement of specialist contract staff for high-risk contracts, risk assessment and risk management plans may be provided as part of the bidder's solution. The procurement authority needs to justify variations. Accurate and timely supervision by managers, control agencies, with regular reporting on the progress of the project. The delegation of authority for approving technical or financial variations may also be done only up to a certain threshold, which requires that additional change orders beyond this threshold be approved by higher authorities. Separate the role of the supervising engineer by appointing i) a project manager to administer the contract and ii) a supervisor to decide upon technical issues. This avoids a potential conflict of interest and collusion whereby the supervising engineer is responsible for finding solutions to issues which arise on the contract (often of their own making) and for determining contractor entitlement for additional time and or costs for implementing the solutions. The government may receive a substantial sum in the event of default in the execution of the contract whereas, if

Stage of the Procurement Process		Examples of Corruption Risks	Mitigation Strategies/Good Practices
--	--	<p>b) Late payments of invoices or long periods between submission and settlement of payment certificates, postponement of payments to have prices reviewed so as to increase the economic value of the contract;</p> <p>c) False or duplicate or exaggerated invoicing for goods and services not supplied and for interim payments in advance of entitlement.</p> <ul style="list-style-type: none"> • Difficulty in benchmarking costs because of remoteness or novelty of construction site/project, limited suppliers and expense of transporting materials. • Remote site location which is difficult to access • Security of the site, workers and access roads 	<p>invoices are not paid within the term established in the contracts, the government agency agrees to pay interest.</p> <ul style="list-style-type: none"> • Consider training community monitors to observe the progress and quality of the project which can be ensured through access to project records. • On charges of corruption, a firm may be denied access through permanent or temporary disqualification to participate in future public procurements. • Ensure that profit and labour costs are separated from the rates for materials and equipment in the Bills of Quantities. This will begin to provide greater transparency on the contractors' costs. • Enforce payment periods stated publicly to reduce the risk of petty corruption. • Opt for new forms of contracts that promote the fair allocation of risk and open book accounting based on actual costs. • Explore the use of project bank accounts whereby all contractors, subcontractors and supervising consultants are paid from a single bank account held in trust. This provides the donor and procuring entity with transparency of payments. • New technologies may be used to monitor the progress of the contract and the payment.

3.7.1 Provision of Comprehensive and Explicit Procurement Rules

Comprehensive and explicit procurement rules and procedures are a prerequisite for curbing corruption in public procurements (ADB/OECD, 2006a; Pope, 2000) since transparency makes it difficult to abuse power and authority while increasing the chances of detection and being caught. In addition, the rules should have been effectively applied, fairly and rigorously enforced with substantial penalties on violations. The reliability of procurement rules over time provides the basis for steady, consistent and transparent procurement practices. The reliability and stability of procurement regulatory framework clearly benefits from the development of the procurement rules and its constitutive elements through parliamentary laws. In the presence of pre-defined procurement rules and regulations, confusions caused by conflicting parliamentary laws and any other modifications are easy to handle to protect against substantial changes later on.

In addition, procurement rules and regulations should cover the full project life cycle from procurement planning to design, tendering, construction and delivery; and should be provided at all state levels (federal, provincial and municipal); across all categories of goods, work, and services; and should be applied to all procuring agencies to achieve the overall goal of stability of a whole regulatory framework. Otherwise, the limited coverage of procurement rules and regulations may harm its effectiveness to curb corruption in the process. Also, it is required that procurement laws should be consistent throughout a country to avoid any confusion for bidders or donors about procurement procedures at different levels of the state or when dealing with different procurement entities under different ministries of the country. This consistency and uniformity of procurement rules, also helps to establish consistent and predictable procurement practices and make judicial review system more effective (ADB/OECD, 2006a). However, excessive regulations provides more opportunities for administrative discretion and thus more opportunities and incentive for corruption (Gould and Amaro-Reyes, 1983). Procurement officials may exploit such opportunities to extract rents for allowing access to goods and services (Gould and Amaro-Reyes, 1983).

3.7.2 Transparency and Fairness of Procurement Laws and Process

Transparency and fairness are pre-requisite to support the basic principles of competition and integrity to curb corruption in public procurements (ADB/OECD, 2006a; OECD, 2007b). Transparency requires to public sufficient information regarding the process, for instance; all procedural provisions, i.e. rules and regulations governing the process, institutions and the persons involved, the tender documents, etc., so that an average stakeholder is aware of how the system works and how it is actually working. Therefore, the greater the transparency, the more difficult it will be to conceal corruption (Transparency International, 2006).

The perception of transparency and fairness of the process is crucial to attract the largest possible number of bidders to participate in a tender. As large participation involves more actors, other forms of corruption e.g. bribery, favouritism, nepotism, and collusion, are also reduced due to more numbers of actors having stakes in the process. When transparency is maintained during public infrastructure procurement, citizens and other stakeholders can scrutinize procurement officials and contractors' performance and decisions and get to know how the procurement officials exercise their authority. This scrutiny also keeps the officials and contractors accountable by making it difficult to abuse the system while increasing the likelihood of being detected and the risk of being punished (Boehm and Olaya, 2006). Transparency also creates awareness on the proper use of public funds, thus increasing the donor and civil society's trust in the system and attracts more private investment in the country. Therefore, "transparency can make a contribution to long-term economic growth and sustainable development" (OECD, 2005:86).

While it is crucial to maintain transparency throughout the procurement process, enhanced transparency should not enable the bidders to spot and misuse the defects in procurement process. This will increase the scope of anti-competitive practices resulting in collusion and corruption amongst bidders (OECD, 2007a).

3.7.2.1 Public Access to Information Laws

Transparency also means access to information on precise procurement rules and clearly defined regulations, standardised tender documents, and information on specific procurement opportunities (OECD, 2005; UNDP, 1999). Access to project information is one of the most effective tools to curb corruption in infrastructure procurement (Cavill and Sohail, 2007a). Steets, (2001a) confirms this viewpoint, stating that problems in public procurement arise from the lack of public access to information. Access to information enables project scrutiny by civil society and helps to monitor government activities. While access to information increases the transparency of public officials' work, it also increases their accountability regarding the matters which affect the public. Legislation regarding public "access to information", in the form of "Freedom of Information (FOI) Act" or "Right to Information (RTI) Act" gives public a statutory "right to know".

3.7.3 Accountability and Control in Procurement Process

Cavill and Sohail, (2007b) emphasise the significance of accountability in attempts to control corruption in infrastructure procurement. Davis, (2004) considers increasing the moral cost of misconduct or the benefits of good conduct as successful anti-corruption measures along with the introduction of accountability. At the same time, an effective review mechanism to handle complaints about procurement decisions is crucial to deter corruption in the procurement process. Therefore, it is considered the responsibility of procurement agencies to establish such an effective internal and external control systems to monitor the performance of the procurement process and procurement personnel. Internal and external control systems may be utilised in mapping out systemic failure and assist compliance with procurement rules and regulations while identifying the irregularities, including corruption in public infrastructure procurement processes.

3.7.3.1 Procuring Agency's Control Systems

These internal and external control systems provide an effective inspection of the procuring agencies and help in detecting significant deviations in

government expenditures. Corruption can be made difficult by establishing internal control systems within the procurement agencies through administrative regulations to perform their work. This internal control system is not operated by any investigators, rather the officials inside the public administration are in charge of this due to them holding the required knowledge and background to do so. Such controls may be related to the risk analysis of the administrative structure, including the top management and the administration, the decision making process, and to the verification of the procurement process itself.

On the other hand, the external control system consists of independent external audits to review the decisions of public procurement entities and are usually carried out by the supreme audit institution in the country. The financial audits can check high value or single-source contracts and the contractors that have been contracting with public procurement agencies for a long time. Performance audits may be used to assess the actual benefits of the procurement process “which contributes to improving operations, facilitating decision making by parties with responsibility to initiate corrective action, and enhancing public accountability” (OECD, 2007b:95).

In the case of construction, physical project audits can help in providing circumstantial evidence of corruption (Kenny, 2009b). Timely evidence, in the case of poor work quality, can help in re-doing the work at the contractor’s expense. Comprehensive physical project audits, when combined with financial audits done, provide particularly powerful evidence to track down any corruption during the project construction phase (Kenny, 2009b). These audit reports can be used later on by the government to monitor the performance of construction assets and to find out how they are maintained.

Moreover, forensic audits are carried out to review the activities and to highlight the risk in the situations that have legal consequences e.g. “in cases of investigation of fraud or corruption to gather evidence to be presented in court” (OECD, 2007a:61). On finding the deviations, the investigators can refer those to internal investigator who will decide whether to bring the information in

notice of the judiciary. In order to keep the public informed, information on audit reports should be published routinely or publicly accessible.

In order to improve internal and external controls, it is recommended that all types of contract changes are to be recorded as small or even minor changes/modifications and may result in additional extra costs and can be used to hide corruption. Keeping such records available can also provide an audit trail and help in the prevention and detection of fraud. The nature of records, level of documentation, and retention time, all depends on the type, timeframe, complexity, sensitivity and procedure of the procurement e.g. record keeping needs to be stricter for using non-competitive procedures (OECD, 2007b).

3.7.3.2 Independent Oversight Bodies

Procurement activities can also be reviewed by independent oversight bodies, for instance, the Parliamentary Committee or **Public Accounts Committee**, to ensure more project control and scrutiny (OECD, 2007b; Pope, 2000). Such bodies can conduct investigations, or organise public hearings for large procurements due to higher risk to public funds. Another independent oversight body is the **Ombudsman** who resolves procurement disputes by conciliation after the investigation of procurement activities (OECD, 2007b; Pope, 2000). Supreme **Audit Institutions** also work to scrutinise government activities and prepare audit reports to present to Parliament (OECD, 2007b; Pope, 2000). Independent **Anti-corruption institutions** can also be established to fight against corruption through independent investigations and prosecution (Cavill and Sohail, 2007a; Pope, 2000).

Such institutions are particularly established in countries where corruption is perceived to be rampant and existing institutions cannot be used to implement reform strategies. Such institutions require adequate powers for transparent investigations by allowing access to all government documentation and subsequently to carry out due prosecution. Otherwise, such institutions can be mere failures when they have no work independence or are prevented from investigating major corruption cases (Pope, 2000).

3.7.3.3 Challenging Procurement Decisions – Complaints and Recourse Mechanisms

Another effective way of regulating procurement process is to provide all participants with an effective mechanism to challenge possible violations of procurement procedures, other competitors' bids, decisions of government officials, and/or bid irregularities (OECD, 2007a). The recourse system provides an opportunity to all stakeholders in the public and private sector, to verify the fairness and integrity of the public procurement process. Such a system helps to monitor the service standards and triggers corruption investigations and sanctions (Cavill and Sohail, 2007a). The complaint systems can be established at administrative and judicial both levels. In addition, alternate dispute resolution boards to judicial review may be established for effective and timely resolution and to avoid the cost of disputes going into litigation.

Generally, bidders are required to submit complaints against procurement decisions directly to the procuring agency which has obvious advantages and disadvantages w.r.t. the independence of review decisions (OECD, 2007b). This mechanism is obviously advantageous in case a genuine mistake rather than a deliberate error has been committed or when “delicate” interpretations of procurement laws are involved. This also helps bidders to avoid confrontation with procuring agencies and reduces their cost as compare to judicial review. The disadvantage of using this mechanism is the biased complaints proceedings when corrupt officials collude and raises questions on independence of the review decisions. Also, it is argued that there is a possibility that such mechanisms can be misused to delay the process or to harm the competitors selected through competitive processes when submission of a complaint can halt the process until its resolution.

3.7.3.4 Introducing Sanctions and Penalties

Quah, (1999) observed that corruption increases in countries where it is perceived as a “low risk and high reward” activity for the reasons of not being detected and punished. Therefore, making corruption a high risk and low profit activity through fear of being caught and the likelihood of being prosecuted

thereafter, can help to reduce corruption in public procurement (Pope, 2000). The legal and financial responsibilities of the participants in a procurement process can be defined in procurement regulatory and procedural frameworks (OECD, 2007a). For effective deterrence, substantial penalties need to be effectively, fully, on time and equally enforced by both, the public administration and courts (OECD, 2007a).

Thus, administrative penalties or criminal law provisions can be introduced for both, the procuring agency and bidders, in relation to violation of procurement rules (OECD, 2007a). Meaningful sanctions related to particular violations of the procurement rules e.g. in the form of denial of access to overall bidding process, debarment or blacklisting for being involved in corruption need to be introduced (OECD, 2005). It is important to note that the probability of being detected and penalised is reduced when gathering evidence becomes difficult due to forged documentation or paperwork during the procurement process, or the evidence is destroyed or misplaced (OECD, 2007a).

3.7.4 Role of Civil Society, Community Monitoring, Media and Donors

There is an emerging trend to involve end users/citizens/communities, civil society and media in the procurement process and to support their fight against corruption. According to Cavill and Sohail, (2007a:19), “Civil society initiatives are able to trigger changes in either service norms (re-shaping attitudes, reverse public apathy and changing tolerance for corruption) or the ways services are delivered (organisational change e.g. monitoring the social and ethical performance of the public officials)”.

Communities can be trained to monitor the delivery of infrastructure projects thus making procurement officials accountable directly to the community (Cavill and Sohail, 2007a; OECD, 2007b). Communities can also exert pressure on service providers to exercise a “zero tolerance” policy for corruption in the procurement process. Citizens can be involved in public hearings and highlighting the local issues and placing recommendations.

Media can also be used to effectively scrutinize the public services (Cavill and Sohail, 2007a; OECD, 2007b). According to Cavill and Sohail, (2007a:21),

“[the] media can control corruption by informing public policy and decision makers, raising public awareness about corruption, its causes, consequences and possible remedies, investigating and report incidences of corruption, expose corrupt officials, and prompt investigations by official bodies.” It is considered that when findings are made widely known by the media, it becomes difficult for relevant agencies to ignore them.

According to Cavill and Sohail, (2007a), approximately 20% or more than this public resources are supplied by donors in more than 60 low-income countries and 40% or more in 30 poor countries. Therefore, donors and international financial institutions (IFIs) can play a key role in fighting corruption in infrastructure procurement while working with related governments partners (Cavill and Sohail, 2007a; Hawkins, 2013). There are different mechanisms which can be initiated by donors and IFIs to prevent corruption in donor projects e.g. building professional capacity of procurement agencies, arranging audits of selected projects, and developing mechanisms of reporting corruption etc. (Cavill and Sohail, 2007a; Hawkins, 2013)

3.7.5 Professional and Ethical Education of Procurement Personnel

Building professionalism amongst procurement personnel using professional and ethical standards is equally important to curb corruption in public infrastructure procurement (Cavill and Sohail, 2007a). In order to ensure whether adequate rules are applied, training can be provided to procurement personnel to let them familiarise with purchasing techniques, explaining and understanding the usefulness, importance, and rationale for procurement rules in order to help procurement personnel build competence and skills for handling complex procurement procedures (OECD, 2007a, 2007b). Training may also be provided to raise awareness of the detrimental effects of corruption the benefits of the ethics for procuring agencies and their officials (OECD, 2007a, 2007b).

In order to carry out proper monitoring of public procurement process, special trainings for auditors to get them well versed with procurement principles, rules and regulations, and operations are also mandatory. Such training can help, “to create an environment in which ethical decision-making is encouraged and

where skills for moral reasoning and the solving of ethical dilemmas are developed” (Cavill and Sohail, 2007a:39).

The procuring agency can introduce “**codes of conduct**” as part of employment and monitor its enforcement through its disciplinary board. Codes of conduct include guidance for public officials” on avoiding the misuse of official position and public resources for improper advancement of personal or financial interest” (Cavill and Sohail, 2007a). In addition, procurement officials may be familiarised with “indicators of suspicions” to help them alert of any behaviours and situations indicating misdeeds by their colleagues in general public interest (OECD, 2007a, 2007b).

In addition, the ethical guidelines may include signing off “**ethical codes**” by procurement personnel explaining restrictions and prohibitions to avoid the “**conflict of interest**” situations so that, “officials’ private interests do not influence the performance of their official duties and responsibilities” (OECD, 2007a, 2007b). Also, the disclosure of assets by public decision makers and officers can help in reducing chances of corruption and making detection easy when it does occur (Cavill and Sohail, 2007a). Breaches of the codes should result in implications for employment or career.

Moreover, “**Integrity Pacts**” may be used by the procurement body in its procurement practices as part of a contract which requires mutual commitment by the procuring agency and all the bidders to avoid and refrain from any corrupt acts and face sanctions for any violations (OECD, 2007b). Ideally, an independent monitor, either hired commercially or assigned by the civil society, should monitor the Integrity Pact (OECD, 2007b).

It has also been observed that inadequately paid public officials are more vulnerable to the temptations of corruption, especially for petty corruption their tolerance may be low as compared to those who are paid well (Cavill and Sohail, 2007a). Therefore, “proper compensation and incentives for those in low positions can play a role in combating corruption” (Cavill and Sohail, 2007a:35).

3.7.6 Facilitating and Encouraging Reporting Corruption

It is a great challenge to acquire information about a committed crime/corrupt act and the actors involved especially when those who are involved in corrupt deals, have no interest in revealing any information regarding the act or those who are aware of these acts and may act as potential informants are particularly vulnerable to retaliations such as intimidation, harassment, dismissal, and demotion. This makes investigations difficult and also hampers effective prosecution of corrupt. In order to start an investigation against corruption, the information need to come as a field complaint or should have been provided by some private individual, or a representative of the participants, or through media news. To encourage disclosure of such information, potential informants, also called whistle-blowers, need to be provided with a trustworthy reporting mechanism to come forward and meaningful legal and physical protection (OECD, 2005). The staff at the procuring agency needs not only to be trained up to spot and alert the authorities about the signs of possible suspicion, but also to facilitate and encourage reporting as an effective strategy to deter corruption in public infrastructure procurement (Cavill and Sohail, 2007a; OECD, 2007a).

It is equally important to clearly define the rules on reporting requirements of corruption internally within public procurement institutions so that procurement personnel be aware of their obligations to report corruption while administering the procurement process, as well as externally to the law enforcing authorities. As encouraging people to whistleblow is important to fight against corruption, similarly protecting them from any retaliations is also very important (Cavill and Sohail, 2007a). If people know they will have the required protection after disclosing wrongdoings, this will encourage more people to come forward and report. Therefore, it is essential to prevent retaliation by providing legal protections in terms of employment and the legal liability to maintain anonymity, or when they occur, offering the needed compensation e.g. financial rewards or advantage in career progress (OECD, 2007b). To sum up, potential whistle-blowers must be well aware of all reporting channels which they can

use, and they must have full confidence that their report will result in appropriate actions.

3.8 Summary

This chapter highlights the issue of corruption in infrastructure procurement. It defines corruption and infrastructure procurement in detail and explains the theoretical paradigm of an act of corruption. The risk of corruption in infrastructure procurement is also highlighted and the ways in which it occurs during procurement process are also discussed. The chapter also provides discussion on causes of corruption and mitigation strategies to control corruption in infrastructure procurement.

4 Infrastructure Procurement and Institutional Trust

4.1 Introduction

This chapter examines different institutional mechanisms that contribute to the development of institutional trust between the participants of the procurement process i.e. procurement organisations and private contractors/bidders, to cater for the likely loss in trust due to perceived level of corruption in this sector. In addition, when procurement organisations emphasise strategies to avoid corrupt practices and wrongdoings during the procurement process, it also becomes an essential promoter of perceived institutional trust between the participants involved in the process. In the following, a detailed discussion about the concept of institutional trust and the institutional trust-building mechanism in the context of the infrastructure procurement process is presented.

4.2 Institutional Trust

Trust is a psychological state that is defined as the general perception of actors about intentions or expected attitudes of other actors (Edelenbos and Klijn, 2007). This implies the, “other party will not abuse the trusting actor’s vulnerability based on positive expectations about the intention or behaviour of the other party” (Chen, 2013; Lane, 1998), thereby restricting opportunistic behaviour in exchange relations (Edelenbos and Klijn, 2007; Morgan and Hunt, 1994).

During an interaction process, actors make decisions whether to trust someone or not depending on the available information regarding other’s trustworthiness. This information can be gained using direct personal experience or in an indirect way by observing how an institutions works in a given context (Offe, 1999). Based on these two sources of information, trust is known as interpersonal and institutional trust respectively. According to Zucker, (1986) institutional trust guarantees that the transaction will take place as promised. She further describes two dimensions of institutional trust which guarantee the trustworthiness of other party: 1) third party certification in the form of

licenses, regulations, and legal recourse; 2) escrows which guarantee the expected outcomes of a transaction.

In essence, institutional trust suggests that impersonal structures are in place in an organisation to ensure the likelihood of a successful transaction, where the parties involved in interaction process lack familiarities and similarities (Pavlou, 2002; Zucker, 1986). This means the parties involved in an interaction process do not have to produce or buy expertise and information which other party can bring to carry out a transaction. Consequently, the contracts in which relationship between the parties is based on trust and “what is expected by both sides is not written out in detail but develops as an ongoing relationship” (Chrystal and Lipsey, 1997:72), are called relational contracts. This means, relationship between the parties are only developed by mutual obligatory force of trust instead of legal force of contracts (Kumar, 1996). Hence, presence of institutional trust would save transaction/contractual cost in relational contracts that would otherwise have incurred in classical contracts where there is not a free flow of data.

4.3 Corruption in Infrastructure Procurement and Institutional Trust

Institutional trust means that citizens are willing to accept and follow government decisions with little or adequate information (Uslaner, 2004). Citizens tend to believe in impartiality, justice and truth of the system and expect that untrustworthy behaviours will be sanctioned by institutions efficiently. Corruption and trust are posited to be polar opposites (Uslaner, 2004). When corrupt actions become publicly known, it undermines the reputation and credibility of government (Boehm and Olaya, 2006). A perception of corruption represents a betrayal of public trust and causes a loss of confidence in state institutions, thereby in institutional processes and the roles of public officials (Anderson and Tverdova, 2003; Boehm and Olaya, 2006; Chang, 2013; Chang and Chu, 2006; della Porta, 2000; Doig and Theobald, 2000; Gould, 1991; Miller et al., 2005; Seligson, 2002; Shih, 2010). Hence, institutional trustworthiness requires public employees to be competent, credible and willing to act in the interest of the general public (Shih, 2010).

In the organisational literature, trust is put as a governance mechanism (Bradach and Eccles, 1989) and restricts opportunism in exchange relations (Morgan and Hunt, 1994). The economic transactions in an organisation affect by the choice of a governance mechanism (Rus and Iglic, 2005). Therefore, information asymmetry, low transparency, and accountability problems in governance system all contribute to opportunistic behaviour (Shih, 2010), and thereby to opportunities of corruption. Bidding participants are likely to perceive the process of infrastructure procurement as fair and will accept decisions which may even compromise their interests if the governance mechanisms and procedures in place ensure that the procurement principles have been followed in the decision making process; procurement procedures have been selected to fit the project needs; bidding participants have been provided chances for a level playing field to compete in, and are able to submit for review or administrative litigation when the procurement personnel perform anything contradictory with the principles (OECD, 2007b). Therefore, the choice of governance mechanisms and procedures during the infrastructure procurement process shapes perceptions of procurement participants towards the trustworthiness of the mechanisms followed.

4.4 Institutional Trust-Building Mechanism(s) in the Context of Infrastructure Procurement

McKnight et al., (1998) defines two type of institutional trust – situational normality and structural assurances. Situation normality implies that success can be projected as a situation is normal. Structural assurances facilitate favourable outcomes because of available contextual structures in an organisation, such as contracts, regulations, and guarantees, similar to Zucker, (1986) typology of guarantees of trustworthiness. Following McKnight et al., (1998) and Zucker, (1986) typologies, structural assurances build institutional trust during infrastructure procurement process for three reasons. First, guarantees ensure that bidders/contractors will behave in a trustworthy way. Second, the institutions redirect the actions of the bidders/contractors involved, allowing procurement organisations to trust them. Third, trust is ensured through structural assurances due to perceived consistency.

Based on the Zucker, (1986) typology, different studies have developed measures to quantify institutional trust, as shown in table 4.1.

Table 4-1: Measures of Zucker's (1986) Institutional Trust from Recent Studies

Measures of Zucker's Institutional Trust from Recent Studies (Source: Kaine et al. 2007)	
(Son, Tu & Benbasat 2006)	A descriptive content analysis of trust-building measures in B2B electronic marketplaces
Context	Identified process-based and institutional-based trust among Business to Business (B2B) market place providers and buyers and sellers in B2B e-marketplaces; characteristic-based trust not considered.
Measurement scale	Presence/ absence measures, 6 measures to identify trust between trading partners and 5 measures used to identify trust between trading partners and marketplace providers.
Institutional-based trust	<u>Between trading partners:</u> 1) use escrow services 2) monitoring of products and services, e.g. through expert product appraisal, product guarantees and warranties, product inspection and third-party product reviews 3) insurance offered on uncompleted transactions or returns through no fault of either trading partner 4) perceptions of cooperative norms of trading partners, e.g. through use of facilitated dispute resolution processes, codes of conduct and provision of information on how transactions are typically made in an e-marketplace 5) member screening, e.g. through credit checking, letters of reference and participant performance reviews <u>Between trading partners and marketplace providers:</u> 1) provide evidence of third party assurance seals such as TRUSTe and WebTrust to address concerns about privacy and reliability of website 2) statement of privacy policy
(Chen et al. 2006)	Promoting relationship selling behaviours to establish relationship value: the case of international airlines
Context	Investigated selling behaviours that international airlines (flying out of Taiwan) might engage in to promote trust and relationship value among customers.
Measurement scale	5-point Likert scale, ranging from 1='strongly disagree' to 5='strongly agree'
Institutional-based trust	1. This airline has provided me with good service at all times. 2. I believe that this airline achieves the favourable promotion promise and obeys the DM agreement. 3. This airline has an honest image in society.
(Rus & Iglic 2005)	Trust, governance and performance: the role of institutional and interpersonal trust in SME [small and medium sized enterprise] development.
Context	Investigated whether there were differences in the level and type of trust (institutional versus interpersonal) among entrepreneurs and managers in Bosnia and Slovenia.
Measurement scale	5-point scale ranging from 1='almost not trust' to 5='a lot of trust'
Institutional-based trust	In general, 1. Do you have trust in state government? 2. Do you have trust in state administration? 3. Do you have trust in local government? 4. Do you have trust in chamber? 5. Do you have trust in banks?

(Gefen 2004)	What makes an ERP [Enterprise Resource Planning] implementation relationship worthwhile: linking trust mechanisms and ERP usefulness.
Context	Investigated how trust is built during an ERP implementation, and the relative weight of this trust compared with the perceived qualities of the implemented ERP itself in determining clients' assessment that the business relationship with the vendor is worthwhile.
Measurement scale	7-point scale ranging from 1='strongly agree' to 4 = 'neutral' to 7 = 'strongly disagree'
Institutional-based trust	<ol style="list-style-type: none"> 1. Vendor has quality certifications from credited institutions. 2. Vendor has impressive credentials.
(Pavlou 2002)	Institution-based trust in inter-organisational exchange relationships: the role of online B2B [Business to Business] marketplaces on trust formation.
Context	Investigated how institution-based trust develops in online B2B marketplaces to facilitate inter-organizational trust (buyers' trust in sellers).
Measurement scale	7-point scale ranging from 1='strongly disagree' to 4 = 'neither agree nor disagree' to 7 = 'strongly agree'
Institutional-based trust	<p><u>Perceived monitoring</u></p> <ol style="list-style-type: none"> 1) There is an effective third-party authority in this B2B marketplace to monitor all sellers and help resolve conflicts. 2) There is an effective third-party mechanism in this B2B marketplace to assure that all products are in accordance with the posted specifications. 3) There is an effective third-party enforcing mechanism in this B2B marketplace to assure that all transactions are conducted properly. <p><u>Perceived accreditation</u></p> <ol style="list-style-type: none"> 1) Assessing the competencies of new sellers is an important part of this B2B marketplace's selection process. 2) I believe that this B2B marketplace undertakes a thorough screening process before sellers are allowed to transact in its marketplace. 3) I believe this B2B marketplace makes a substantial effort to assess the sellers' true competencies. <p><u>Perceived legal bonds</u></p> <ol style="list-style-type: none"> 1) This B2B marketplace imposes formal agreements that detail sellers' obligations. 2) Participating in this B2B marketplace implies that sellers have formal contractual agreements with buyers. <p><u>Perceived feedback</u></p> <ol style="list-style-type: none"> 1) A considerable amount of information about the transaction history of most sellers is available from this B2B marketplace. 2) If any seller misconducts in a transaction, a reliable feedback mechanism is provided by this B2B marketplace to inform buyers. 3) There is an effective mechanism in this B2B marketplace to allow buyers to publicize their purchasing experience with other sellers. <p><u>Perceived cooperative norms</u></p> <ol style="list-style-type: none"> 1) This B2B marketplace promotes cooperative norms for sellers to resolve any transaction disputes. 2) Sellers rarely take advantage of buyers in this B2B marketplace. 3) Most sellers are willing to make cooperative adjustments to transact successfully. 4) Buyers and sellers in this B2B marketplace exchange a considerable amount of information before transacting. 5) This B2B marketplace provides ways for buyers to receive relevant information from sellers before purchase.

A common thread of these studies reveals that they are highly context specific. As institutional trust is perceived as situational belief about structures in place, following Zucker, (1986) and McKnight et al., (1998) typologies of trust, specific constructs that create institutional trust in context of infrastructure procurement are to be described. A discussion about the proposed institutional mechanisms or structural assurances (e.g. accreditation, feedback mechanisms, etc.) based on Pavlou, (2002) typology is now presented. These institutional structures are capable of enhancing procurement participants' overall level of trust in procurement market by removing fraudulent bidders/contractors from the market, either initially (accreditation) or subsequently (monitoring, legal bonds, cooperative norms).

4.4.1 Perceived Monitoring

Monitoring is defined here as an institutional mechanism by which the procurement administrators/regulators supervise all procurement transactions (Pavlou, 2002). According to Pavlou, (2002:221) monitoring is “the set of activities undertaken to assure that all transactions are performed as specified by a predetermined set of widely accepted agreements and rules”. It determines that all transactions are being carried out in accordance with the established standards by inspecting economic activities of the actors involved and sanctioning wrongdoings. Thus, monitoring is a form of an institutional mechanism that encourages responsible behaviour (Zucker, 1986). It is likely that there are variations in an individual organisation's perceptions about the effectiveness of the monitoring mechanism. Therefore, perceived monitoring refers here as the level to which procurement organisations believe that the third-party monitoring mechanism assures that all procurement transactions are performed as expected. Thereby, monitoring builds trust in bidders/contractors by making opportunism irrational and mitigating uncertainty.

In order to avoid any sanctions or subsequent removal from market, normally the bidders/contractors make sure that all transactions are made as promised. Hence, perceived monitoring creates trust by imposing the costs of wrongdoing than the potential incentives. As perceived monitoring creates trust, primarily

through the fear of being caught for wrongdoings, it is not expected to influence trust in the bidders'/contractors' goodwill (benevolence) which requires bidder's/contractor's not to behave opportunistically even when they are not monitored fully (Mayer et al., 1995). On the other hand, a rational assessment of the situation suggests that trust is created on the basis of the economic rationale, which, if given the chance, can be overcome by opportunism.

4.4.2 Perceived Accreditation

According to Heide and John, (1990) accreditation is determined by the level of efforts being undertaken to assure that an organisation is performing as expected. According to Pavlou, (2002), accreditation can be reliably used to verify the competence of an organisation only when it is performed by an independent authority. In the case of infrastructure procurements, such authority can be via a regulatory body who regulates public procurements. Pavlou, (2002) describes accreditation as a surrogate for reputation and refers this to Bergen et al., (1992) concept of 'institutional signalling activity' while arguing this to be a sound structural assurance mechanism as required by Zucker, (1986) institutional-based trust building typology.

As perceived accreditation mechanisms may vary for its effectiveness, it can be defined as the extent to which the buyer organisation, (i.e. procuring entity here), believes that the "accreditation mechanism is able to provide reliable information about the capacity of seller organizations [contracting firms in this study] to perform as expected" (Pavlou, 2002:222). Based on the rational assessment of accreditation outcomes, procuring entities may trust since bidders/contractors who may lose their credibility for any wrongdoings or misbehaviour. Therefore, a contractor's credibility can be created by increasing the fear of losing accreditation and thereby lowering the opportunistic behaviour.

4.4.3 Perceived Legal Bonds

Various authors suggest legal bonds as an institutional mechanism that creates trust by increasing the legal cost of misbehaviour and thereby reducing

opportunistic behaviour (McKnight and Chervany, 2001; Sako and Helper, 1998; Shneiderman, 2000). Legal bonds refer here to “lawful contracts that govern economic activity” (Pavlou, 2002:222). As perceived legal bonds may vary among procuring entities on the basis of their effectiveness, Pavlou, (2002:222) defines ‘perceived’ legal bonds specifically “as the extent to which buyer organisations [i.e. procurement organisations] believe that contracts are able to legally certify that all transactions are performed as specified by a predetermined set of laws”.

Based on rational assessment, perceived legal bonds create trust by imposing higher costs of illegal behaviour than the potential benefits. Like monitoring, legal bonds build procuring entity’s trust in contractor’s credibility by allowing them to fulfil their promises in order to avoid any legal actions on wrongdoings. However, a rational assessment of the situation suggests that trust is created on the basis of an economic rationale, which, if given the chance, can be overcome by opportunism. Therefore, it is unlikely to influence a contractor’s benevolence.

4.4.4 Perceived Feedback

Feedback mechanisms ensure the collection and distribution of information regarding the past performance of contracting organizations. Based on Zucker, (1986) institutional-based trust typology, researchers have suggested feedback mechanisms as a structural assurance that creates buyers’ (i.e. here procuring organisation’s) trust (or credibility) in sellers’ (i.e. here bidders’/contractors’) by providing signals of a good reputation while discouraging opportunistic behaviour (Ba and Pavlou, 2002; Pavlou and Gefen, 2002; Pavlou and Ba, 2000). As the effectiveness of feedback mechanisms depends on the perception of participating firms about its credibility, therefore, perceived feedback can be defined as “the extent to which firms believe that a feedback mechanism by a properly designed third party structure is able to provide reliable information about the sellers’ [i.e. Contractors’/Bidders’] past trading activity” (Pavlou, 2002:223).

4.4.5 Perceived Cooperative Norms

According to Pavlou, (2002:223) cooperative norms refer to, “the values, standards, and principles to which a population of organisations adheres”. A trustworthy behaviour may be induced by sharing common grounds of values, attitudes, and interests, amongst the participants of a transaction which also discourages opportunism (Axelrod, 2006). When buyers (i.e. here procuring agencies) believe that sellers (i.e. here bidders/contractors) will adhere to cooperative norms in place, they can make suggestions about sellers’ (i.e. bidders’/contractors’) goodwill intentions (Macneil, 1980). By acting upon these norms, sellers involve in responsible actions by conveying good faith (Aoki, 1984).

Cooperative norms create trust by crafting a shared understanding and ease of each parties expected behavioural patterns. Trust may be created by sharing more on-time and meaningful information between suppliers and buyers (Morgan and Hunt, 1994) where more information positively influences this trust (Dyer, 2002). Perceptions of cooperative norms may vary among organisations, therefore, perceived cooperative norms refer here to “the buyer’s expectations of the values, standards, and principles to which sellers adhere” (Pavlou, 2002:223).

4.5 Knowledge Gap

An understanding of all types of corrupt practices occurring in infrastructure procurement and the causes behind it, can be of great help in formulating the strategies to address the problem of corruption. In addition, effective institutional mechanisms can be introduced to enhance the institutional-based trust between the participants of procurement process. For better understanding of various issues involved with corruption and institutional-based trust in context of public procurement of infrastructure projects, a thorough literature review was conducted in Chapters 2, 3, and 4 using academic research journals, conference proceedings, PhD dissertations, country specific policy papers, occasional publications, text books and newspapers etc. It was found that very few country specific studies on corruption in public procurement of

infrastructure have been conducted, including Pakistan. In addition, no studies have been conducted to explore and measure the institutional trust-building mechanisms to enhance the trust between the participants of the procurement process. This knowledge gap in the currently available literature, prompted an inquest to identify various corrupt practices and the causes behind their occurrence in infrastructure procurement process while proposing the institutional trust-building mechanisms to enhance the institutional-based trust between the participants of the procurement process in Pakistan. This study also intends to inform the formulation of a conceptual framework to control corruption in infrastructure procurement process.

4.6 Summary

This chapter highlights the importance of institutional trust in infrastructure procurement and describes in detail institutional trust-building mechanisms in infrastructure procurement context. The chapter also highlights the reasons that contribute to and underlay trust-building mechanisms to create trust, thereby describing the dimensions that create inter-organisational trust between the procurement organisations and the private contractors/bidders.

5 Research Methodology

5.1 Introduction

A systematic research approach relates an individual project to the wider research community and makes it more accessible and rigorous in terms of its underlying shared beliefs as well as a common understanding of the methods and terminology employed. This forms the purpose of the present chapter. The chapter presents and critically evaluates the research approaches, the reasons for using particular research methodology and methods and the issues of reliability and validity of these methods, in addition to the sample selection, recruitment and survey administration and analysis techniques.

5.2 Research Approaches

This section explains two main research approaches; the deductive approach, the inductive approach (Saunders et al., 2009). These approaches can be used independently or concurrently in a research. The following sub-sections explain each approach.

5.2.1 Deductive Approach

Deduction means reasoning from the general to the specifics or inferring from the general laws to the particular instances (Gulati, 2009). The conclusions drawn using deductive reasoning would be true if all the assumptions were true on which these conclusions were based (Saunders et al., 2009). The deductive research approach is “concerned with developing a hypothesis (or hypotheses) based on existing theory, and then designing a research strategy to test the hypothesis” (Wilson, 2010:7). In other words, such an approach aims to test a theory in a way that, “it begins with an expected pattern that is tested against observations” (Babbie, 2012:51). That means deductive research approach involves exploring a known theory or phenomenon to check if that is valid under given circumstances (Beiske, 2007). This research approach develops propositions which can be generalised to larger populations, and require random samples which should be representative of the population being studied in order for the outcomes to be generalisable (Carr, 1994).

In other words, this approach needs a highly structured methodology to deliver repetition and to guarantee reliability (Gill and Johnson, 2010; Saunders et al., 2009). Therefore, this approach is associated with quantitative research methodology (Bryman, 2006; Saunders et al., 2009).

5.2.2 Inductive Approach

Induction is considered as a logical method of reasoning from the particular to the general or inferring from the particular instances to the general laws. In other words, inductive research approach “involves the search for pattern from observation and the development of explanations – theories – for those patterns through series of hypotheses” (Bernard, 2011:7). According to this approach, conclusions are judged and verified by the observations of the real world. This research approach focuses on exploring new phenomena or looking at the previously researched phenomena from different perspective. It begins with the observations and new theories are evolved towards the end of the research based on these observations/data (Goddard and Melville, 2004). This research approach is mainly associated with qualitative research design (Bryman, 2006; Saunders et al., 2009) and does not require large sample of research (Easterby-Smith et al., 2002; Saunders et al., 2009).

5.3 Research Design and Methodology

Methodology is generally referred to the general research strategy or set of techniques or framework encompassing overall research process (Nachmias and Nachmias, 1996). Such a research framework influences research procedures or techniques or methods or ways which are used by the researcher to investigate different situations and to collect data. In other words, methodology relates to the way the research is going to be conducted, and the tools and techniques that are going to be used to collect and analyse the data to answer the research questions. The choice of methodological techniques or methods employed by a researcher are informed by the research problem under investigation and the nature of the information that the researcher tries to produce. In other words, the choice of the research methodology employed must be suitable to the specific situation or phenomenon under investigation. It is, therefore, essential

for researchers to adopt the appropriate methodology to achieve the research objectives; and select the right data collection methods to collect required data within the available resources (Gill and Johnson, 2010).

The research design is described as the overall combination of methods that guides the investigator in terms of how to collect, analyse and interpret the observations/data (Nachmias and Nachmias, 1996). It is also considered as an action plan from getting here to there (Yin, 2003). In formulating that action plan, several design alternatives can be considered. And even with one design, it is possible that several different data collection methods are suitable. According to Walliman, (2005) it may be possible that several research methods could justifiably be used to investigate and analyse different aspects of the same research problem. In current research study, a combination of methodological techniques was utilised to investigate the research questions in order to produce the required data. Moreover, the triangulation of research methods was adopted to maximise the validity and strength of the research and thereby reducing the investigator's biases (Denzin, 1970).

Denzin, (1970) identified four basic types of triangulation as given below:

- **Data triangulation:** this is the process of gathering data through the combination of several sampling methods (including gathering layers of data at different times, in different social settings and from different people).
- **Investigators triangulation:** this involves the use of multiple researchers in an investigation.
- **Theoretical triangulation:** this involves the use of more than one theoretical scheme in interpreting data.
- **Methodological triangulation:** this refers to the use of more than one method (like interviews, observations, questionnaires, and documents) for gathering data.

In present research study, methodological triangulation was utilised while addressing the research aim and objectives. In particular, a mixed methods approach utilising a combination of qualitative and quantitative research

methods was adopted, the specifics of which are discussed in the following sections.

5.3.1 Quantitative Research Methodology

Quantitative research methodology involves a systemic approach to quantify the phenomena and produce findings after statistically examining the meanings, process and entities. The process generally constitutes the following: it begins with an idea/theory, a hypothesis is constructed and tested, and by deduction conclusions are drawn (Becker and Bryman, 2004; Hussey and Hussey, 1997). In other words quantitative research methodology tests a theory deductively from existing knowledge. This means, while using a quantitative research approach conclusions are drawn deductively from premises or propositions. The use of quantitative research methods in analysing a representative sample of a population helps to draw conclusions about the whole population. Therefore, the main advantage of quantitative methods – being numerical, deductive and focused on answering ‘how much’ questions – is generalisability of results.

The generalisation of the study outcomes based on random samples is considered as a distinct feature of quantitative studies with the intent being reliable and reproducible information of the relationships between the variables being studied, and enables predictions over future outcomes. On the other hand, the weakness of the quantitative research approach is that random sample selection is time consuming, and also may result in opportunistic samples being used for most of the studies allowing criticisms to creep in regarding sampling bias e.g. the sample becomes self-selecting. Moreover, this research approach is criticised in terms of its limitations in closed questions which may cause to ignoring some details during the research process (Saunders et al., 2009).

5.3.2 Qualitative Research Methodology

Qualitative research methodology is associated with the quality of phenomena and is concerned with the interpretations of words rather than numbers. This research approach is related with how people make sense of a phenomena through their interpretations of particular natural settings. This research approach offers detailed investigations of an individual’s perceptions, views,

beliefs, opinions, understandings, attitudes, behaviour, feelings, etc. and provides descriptive explanations, meanings and interpretations these individuals give to a particular situation (Fellows and Liu, 2008; Hakim, 1987). In other words, qualitative approach focuses on the holistic view of the research environment and interprets social phenomena and reality as a result of an individual's social interactions. Using this approach generalisation of findings is not a major concern but to understand the phenomena (Robson, 2011). The data is collected in a particular context to view the social world as a creation of the people involved to emerge concepts and theoretical ideas (Robson, 2011). In doing so, this research approach mainly focuses on answering why and how questions using non-numerical data and inductive reasoning approach.

The qualitative research involves different enquiries and interpretive methods to investigate human knowledge and understanding as described by (Schutt, 2006:19):

”Methods rely on written or spoken words or observation that do not have a direct numerical interpretation and typically involve exploratory research questions, inductive reasoning, an orientation of social context, and the meanings attached by participants to events to their lives”.

On the other hand, the same interactive and participatory nature of qualitative research approach is considered by some as its weakness due to potential bias in data interpretations as highlighted by Crossan, (2003; citing Mays and Pop, 1995).

“Firstly, that qualitative research is merely an assembly of anecdote and personal impressions, strongly subject to researcher bias; secondly, it is argued that qualitative research lacks reproducibility –the research is so personal to the researcher that there is no guarantee that a different researcher would not come to radically different conclusions; and, finally, qualitative research is criticised for lacking generalisability”.

5.3.3 Mixed Methods Approach

The quantitative research approach is known for its strength in generalising the results i.e. by analysing a representative sample of a population with highly

structured numerical data, the conclusions are drawn deductively about the whole population. Similarly, the qualitative research approach is known for its ability in teasing out complex causal mechanisms using inductive reasoning and non-numerical data to produce a deeper and context sensitive understanding of the phenomena under investigation. On the other hand, both qualitative and quantitative research approaches while using inductive and deductive reasoning can also be employed together for a more complete understanding of the topic of interest. Such a mixed methods approach actually draws on the strengths from both research approaches in order to reach, “the elusive goal of an explanation that has both generality and deep understanding” (Faguet, 2009:3). That has been the goal with combining both quantitative and qualitative research methods in this thesis. This multi-method realm where both, qualitative and quantitative research methods are blended in the same research project has become increasingly popular in the last two decades (Robson, 2011).

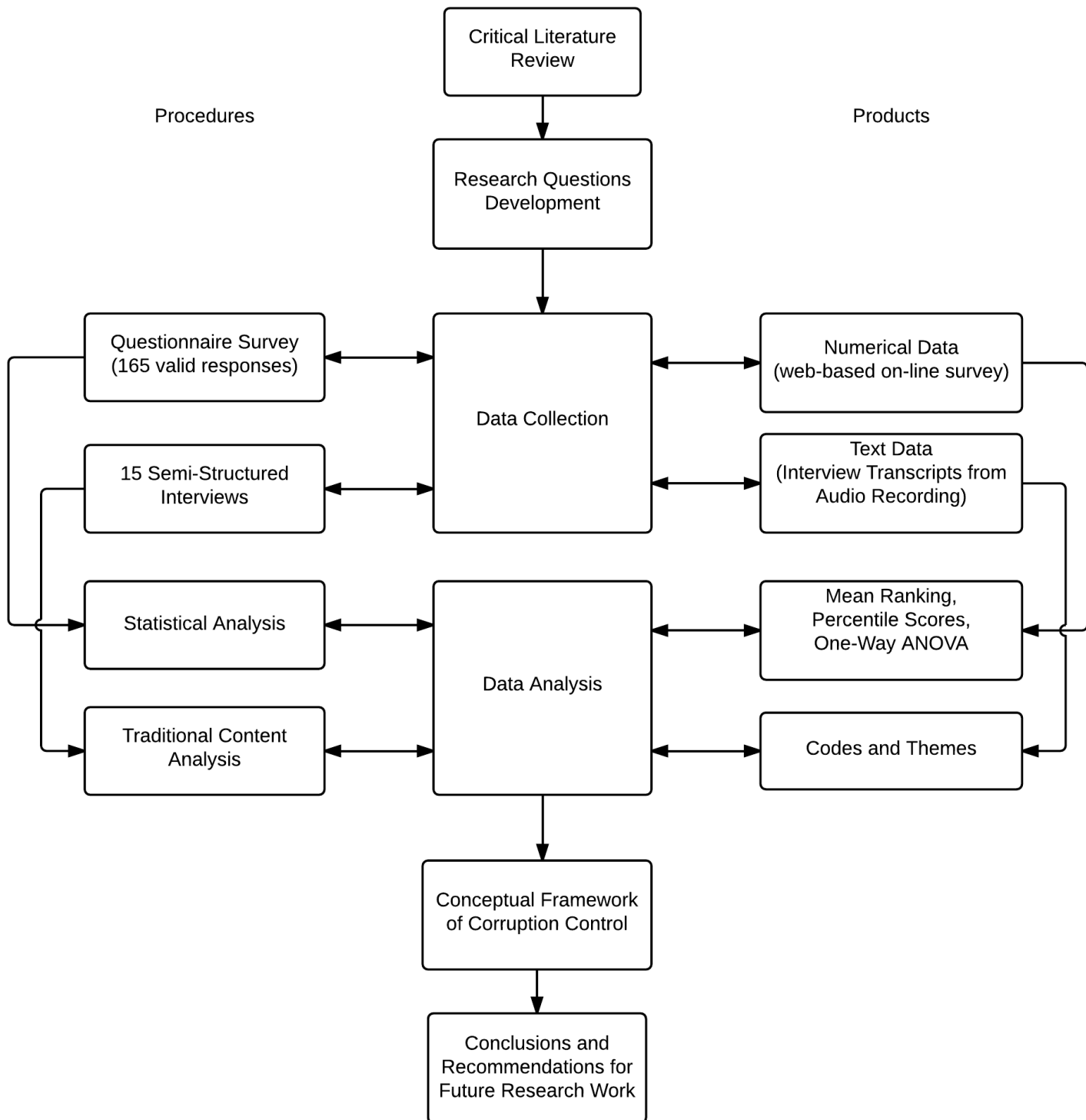
The main reason for adopting a mixed-methods approach in present study was to answer different research questions which required different types of data and to seek triangulation in order to corroborate the findings from different methods (Bryman, 2006; Creswell and Clark, 2011). In addition, the findings from both qualitative and quantitative data were particularly valuable in creating a more complete picture of the phenomena under investigation (Cohen et al., 2007; Robson, 2011). The identification of potential risk of corruption and institutional trust-building mechanisms during infrastructure procurement in Pakistan required an exploratory study by quantitative research methods – conducted here using a questionnaire survey. On the other hand, inquiry about the causes of corruption during infrastructure procurement process in Pakistan required an explanatory study by qualitative research methods – conducted here using semi-structured interviews.

The research approach adopted in present study is known as Nested/Embedded Mixed-Methods research design in which an independent level of interaction exists between qualitative and quantitative research methods which are given equal priority while conducting the research (Creswell and Clark, 2011). This

approach keeps the research questions, data collection and data analysis separate for both quantitative and qualitative research methods. As both, qualitative and quantitative methods are conducted in a single phase, this is called concurrent nesting of mixing the methods. The two research methods are only mixed or integrated while drawing the conclusions during the overall final interpretation of the research findings.

In order to pursue the research aim and objectives, as mentioned in Chapter One under Section 1.4, the research design followed a stepwise process as shown in Figures 5.1. The first step was the critical review of the literature in order to develop the research questions followed by the research aim and objectives. The main aim of the literature review was to explore relevant research by other scholars and researchers in order to use that as the theoretical underpinnings for the current study, and to precisely specify the research questions and prepositions. This is considered as a key element of research as it leads to the selection of an appropriate unit of analysis (Yin, 2003). The adopted research approach required quantitative (using questionnaire survey) and qualitative (using semi-structured interviews) data collection and analysis separately but in a single phase. The empirical investigations were carried out in Pakistan. The findings of the quantitative and qualitative data subsequently helped in the development of the corruption control framework and to draw the conclusions and recommendations.

Figure 5-1: Research Framework



(Source: Created by the Author)

Table 5.1 shows the relationship between the research objectives, research methodology, and the reason/justification for the use of particular methods.

Table 5-1: Research Objectives, Research Methodology and Reasons for using the Particular Method

Research Objectives, Research Methodology and Reasons for using the Particular Method			
No.	Research Objectives	Research Method(s) (Chapters)	Justifications/Reasons of using the Particular Method(s)
1	To investigate the risk of corruption and its various causes during procurement of both, traditional and PPP infrastructure projects in Pakistan.	i) Literature Review (Chapters 2,3) ii) Questionnaire Survey (Chapter 6) iii) Semi-structured Interviews (Chapter 7)	Past and current literature, questionnaires and interview surveys help to identify the potential corrupt practices, the causes behind and mitigation strategies.
2	To investigate the way to enhance institutional-based trust between the participants of the procurement process in Pakistan.	i) Literature Review (Chapter 4) ii) Questionnaire Survey (Chapter 6)	The principles of 'institutional trust-building' in the literature, and the use of a questionnaire survey help to identify the institutional trust-building structural mechanisms in the context of infrastructure procurement market.
3	To develop a generic framework to control corruption during infrastructure procurement process in general and for Pakistan in particular.	Analysis of findings of questionnaire and interview surveys, and literature review (Chapter 8)	The generic framework is based upon feedback mechanism approach for corruption control in infrastructure procurement process. The feedback questionnaire is used to gauge the validity of the framework.

The following present a detailed discussion about empirical investigation techniques and the data validation carried out during this research study.

5.4 Questionnaire Survey for Quantitative Data Collection

A questionnaire survey research technique allows the collection of factual information; the information on what the respondents know about the subject being studied based on their knowledge, past and current experiences, in addition to their opinion/viewpoint on the variables involved in the subject

being studied. The questionnaire survey provides the opportunity for researcher to study the subject that has not had prior formulation. The questionnaire survey is considered frequently used methods of data collection in exploration and evaluation research (Clarke and Dawson, 1999; Fellows and Liu, 2008; Popper, 2002), particularly to seek generalisation of the findings (Robson, 2011). A large number of studies have used the questionnaire survey method as a research instrument (Ahmed et al., 1999; Akintoye et al., 1998; Akintoye and MacLeod, 1997; Bajaj et al., 1997; Baker et al., 1999; Chan et al., 2001; Kenny, 2006; Lam and Chow, 1999; Olken, 2007; Søreide, 2004; Wang et al., 2000, 1999), some in particular to exploring the phenomenon of corruption (Kenny, 2006; Søreide, 2004; Olken, 2007).

The use of questionnaire survey as a quantitative research method has several advantages as given by different researchers (Barrat and Cole, 1991; Bell, 2005; Blaxter et al., 2010; Clarke and Dawson, 1999; Dane, 1990; Fellows and Liu, 2008; Robson, 2011), which are increased in case of internet surveys:

- It presents a simple approach to study attitudes, values, beliefs and motives.
- It can produce large quantities of highly structured and standardised data.
- It can provide access to a large number of people very quickly, at relatively low cost.
- It can be made in a way to collect response anonymously resulting in more honest views, especially for sensitive subjects.
- It allows sufficient time to respondents so that they can respond at their convenience, also can take time in case they need to check the records before finally answering.
- It addresses a specified set of questions to large samples and produces fairly reliable results.
- It can be used as both, the main or supplementary research data collection method.

- Above all, it has the advantages of validity (no interviewer bias) and efficiency (low labour, time, cost and geographical displacements) while reducing the errors caused by an interviewer's personal characteristics/skills.

On the other hand, questionnaire surveys are criticised for possible lack of response, an inability in investigating the sample's answers in-depth, response bias and the risk of ambiguities in and misunderstanding of a questionnaire's directions on how to complete it or the meanings of the statements, and limited Internet access in case of Website-based survey (Bell, 2005; Robson, 2011).

5.4.1 Sample

The sampling technique used for data collection in this research using questionnaire survey was a non-probability sampling technique known as "Convenience Sampling". Convenience sampling involves, "choosing the nearest and most convenient persons to act as respondents" (Robson, 2011:275). which uses a group of people that is convenient to access. Convenient sampling technique was used rather than random sampling, which demands the size of the population to be large and known (Diekhoff, 1992; Fellows and Liu, 2003). This sampling technique was used for two main reasons:

1. There is no comprehensive, or any standard, database of organisations in Pakistan that are involved in both traditional and PPP infrastructure projects.
2. In addition, PPP procurement is new in Pakistan and is still evolving. As a result of this, the number of organisations involved are growing, but not in a way that the overall number of these organisations can be determined.

According to Robson, (2011), convenience sampling is probably most widely used method of sampling, though not very satisfactory. Peterson, (2001) reports that 86% research subjects in Volume 26 of the *Journal of Consumer Research* used a convenience sample in empirical investigations, whereas, Simonson et al., (2001) reports that 75% of the research subjects in *Journal of Consumer Research* and *Journal of Marketing Research* used convenience samples in their

articles, and Leiner, (2014) reports that 77% research subjects in the *Journal of Communication* (2012) made use of convenience samples. The use of convenience samples for empirical investigations is not new (Courtright, 1996; Ferber, 1977; Peterson, 2001) and in particular a large amount of studies in the social research literature have adopted this approach (Aaker and Sengupta, 2000; Abdolmohammadi et al., 1997; Ahmed et al., 2003; Berkowitz and Donnerstein, 1982; Houde, 2002; Kardes, 1996; Lucas, 2003; Mikhailitchenko et al., 2009; Potter et al., 1993; Sherry et al., 2007; Sparbel and Anderson, 2000; Strizhakova et al., 2008).

In order to solicit the opinion of different types of stakeholders (client, consultant, contractor and researcher), the target population comprised of individuals from a diverse background who had been working closely with both, traditional and PPP infrastructure procurement processes in Pakistan. Survey participants were selected due to their direct hands on experience and responsibilities or indirect involvement as a researcher in both, traditional and PPP infrastructure procurement processes in Pakistan either in past or at the time the survey was conducted. The questions regarding respondents' nature and areas of industrial work experience were included in the questionnaire to ensure that they met the required criteria.

5.4.2 Recruitment of the Questionnaire Survey Sample

As no database is maintained for procurement professionals in Pakistan except the list of approved contractors by Pakistan Engineering Council, the participants in this study were identified through organizational and research studies in similar areas of corruption and infrastructure procurement. Respondents were approached by the author via social networking websites and emails to relevant organisations to inform them of the study purpose. On gaining written consent by email to participate, respondents were sent a link to the online questionnaire. In order to attempt to improve the response rate, several steps were taken when drafting the questionnaires (see section 5.4.5), such as; the survey was prepared to look as attractive as possible and all instructions were clear and easy to follow, and finally explanations/definitions

of the research variables were included to avoid misunderstanding of the meanings of the statements.

The underlying assumptions and purpose of the survey was to collect data around respondents' activities within their organisations. However, as we hypothesise that many of the respondents would have been involved in corruption themselves, asking direct questions on this topic is (for obvious reasons) difficult. Therefore survey questions revolved around the corruption of other known organisations or “typical organizations and their officials in the industry” rather than asking directly about corrupt practices of the respondents and their institutions.

5.4.3 Response Rate

The questionnaire survey was conducted from January 2013 to March 2013 in Pakistan. A total of 450 questionnaires were distributed through e-mail using an online survey tool – “e-survey creator”. The e-mail message for participants contained instructions about the use of online questionnaire and data collection platform called the “e-survey creator”. In total, 165 (37%) completed questionnaires were valid for analysis. The initial response rate (20%) was low, hence, a round of reminder was sent out at an interval of 10 days to increase the response rate (37%). During this whole process, close monitoring was carried out in order to track the replies in each of the categories of respondents (client, consultant, contractor and researcher) and to ensure that the distribution of responses across stakeholders was largely equal. Despite these efforts, there was an unequal response rate in all four categories but sufficient in total to carry out a meaningful analysis. The questionnaire statistics, profile of the respondents and overall industrial work experience are shown in Table 5.2 and Table 5.3 below.

Table 5-2: Questionnaire Statistics

Total No. of Questionnaire	Type of Respondents			
	Client	Consultants	Contractors	Researchers
Distributed	138	150	123	39
Response Received	56	82	35	22
Valid Response	40	76	29	20
Effective Response Rate	30%	51%	24%	51%

Table 5-3: Respondent's Profile

Work Experience (Years)	Number of Respondents				Total
	Client	Consultant	Contractor	Researcher	
≤ 5	12	16	9	4	41
5 – 10	10	10	1	3	24
10 - 15	1	11	6	2	20
15 - 20	9	19	7	6	41
≥ 20	8	20	6	5	39
Total	40	76	29	20	165

5.4.4 Questionnaire Design

- The questionnaire as shown in Appendix B is comprised of two major sections. In section I, information about the respondent's type of organization, nature and sector of the projects involved and respondent's overall industrial work experience was collected.
- Section II consists of two questions. Question one comprises of relative frequencies of top twenty potential corrupt practices during infrastructure procurement (traditional and PPP) process were asked using a 5-point Likert scale, where; "1= Almost Never" and "5= Almost Always". The Likert scale was originally developed by Rensis (Likert, 1931) who used this technique for the assessment of attitudes. Question two consists of relative frequencies of institutional trust-building mechanisms in context of infrastructure procurement market in Pakistan, using a 5-point Likert scale, where "1 = Strongly Disagree" and "5 = Strongly Agree". Towards the end of the questionnaire, an open-ended question was also posed to obtain any other comments by the respondents on corruption in infrastructure procurement and institutional trust-building mechanisms in that context.

5.4.5 Pilot study

Based on literature review (Chapter 3, Sections 3.5 and 3.6), a list of 65 potential corrupt practices observed during procurement process were identified. Based on the literature review, a list of 65 potential corrupt practices observed during the procurement process was obtained. The following major sources were consulted to identify potential corrupt practices during the procurement of infrastructure projects:

(1) Stansbury, (2005), (2) Klitgaard, (2012), (3) Søreide, (2002), (3) Susan Rose-Ackerman, (1999), (4) Cobarzan and Hamlin, (2005), (5) Cavill and Sohail, (2007a), (6) Asian Development Bank/Organization for Economic Co-operation and Development (ADB/OECD, 2006a; OECD, 2007b, 2005).

A survey based on these potential corrupt practices was prepared and distributed amongst procurement professionals and researchers in Pakistan (a sample of the pilot questionnaire is attached in Appendix A). The questions in that survey requested the respondents to indicate the likelihood of occurrence on average for each of the mentioned corrupt practices. The respondents were also given a choice to add any other corrupt practices not mentioned in the questionnaire. A five point Likert scale was used to collect the responses. In total, 25 (78%) completed questionnaires were received.

The potential corrupt practices during infrastructure procurement process were classified under three categories:

- 1-** Potential corrupt practices likely to occur during pre-tendering phase
- 2-** Potential corrupt practices likely to occur during tendering phase
- 3-** Potential corrupt practices likely to occur during post-tendering phase

Ranking of all 65 potential corrupt practices was done based on the responses of this pilot study. Top 20 (mean value > 2.5) most frequent potential corrupt practices were picked up to develop the main questionnaire. The findings of this pilot study led to the preparation of the main questionnaire. The participants of pilot study were also asked to evaluate the structure and readability of the

questionnaire. The feedback by the respondents was incorporated in developing main questionnaire.

5.4.6 Preparation of main Questionnaire

The main questionnaire survey comprised two major sections (a sample of the questionnaire is attached in Appendix B). In section I, information about the respondent's type of organisation, nature and sector of the projects involved, and the respondent's overall industrial work experience was collected. Section II consisted of questions asking about the relative frequencies of the top 20 potential corrupt practices in the infrastructure procurement process. These were asked using a 5-point Likert scale, where "1= Almost Never", "2= Occasionally", "3= Sometimes", "4= Frequently", and "5= Almost Always". The Likert scale was originally developed by Rensis Likert, (1931) who used this technique for the assessment of attitudes. It is assumed that corruption, as worded in each question and its impact; do not vary across the role or domain.

Section II consisted of other questions asking about the stakeholders' perceptions of institutional trust using the relative frequencies of the attributes/measures of institutional trust-building mechanisms in the context of infrastructure procurement market in Pakistan. These were asked using a 5-point Likert scale, where "1= Strongly Disagree" and "5= Strongly Agree". At the end of the questionnaire, an open-ended question was also posed to obtain any other comments by the respondents on corruption during infrastructure procurement process in Pakistan and institutional role in controlling corruption.

5.4.1 Limitations of the Quantitative Data

The findings from this study should be viewed cautiously due to the limited sample size, the convenient sampling technique, and the fact that the data was collected over a short period of time without repeated administration. The generalisability offered by this empirical analysis is also limited here due to the following assumptions made during the study:

- 1- It is assumed that the impact of perceived corruption, as stated or worded in the questionnaire survey, operates in the same fashion across varying

samples & employment domain i.e. varying role and domain of the employee/procurement official.

- 2- It is assumed that the perceived degree of corruption is consistent among all categories of the respondents.
- 3- It is assumed that the ratings provided by the participants are accurate estimates as it is believed that the participants do not hold certain prior belief (e.g. about the system of governance etc.).
- 4- It is assumed that the participants are naive with the scale and items being used to measure corruption in the questionnaire survey.

Nevertheless, the results are potentially important since, to date, no previous studies have examined corruption in infrastructure procurement in the particular country context of Pakistan. Moreover, every attempt was made to be impartial and to remove any bias that might have been detected in the data interpretation. Furthermore, references were cited throughout the discussion and analysis of this research project in order to help the reader to obtain an unbiased view.

5.4.2 Statistical Methods

Data collected using questionnaire survey was analysed using several statistical methods as given below:

5.4.2.1 Mean Ranking

Based on the mean values of the responses obtained, the 20 corrupt practices mentioned in the main questionnaire were ranked for traditional and PPP infrastructure procurement route separately. Mean ranking was used to determine the significance of each factor rated by the respondents. Wang et al., (1999), Kululanga et al., (2001) and Li, (2003) have used similar practice when conducting evaluation from survey results. The corrupt practice with the highest mean value was assigned rank 1, the next highest was assigned rank 2 and so on for all the 20 corrupt practices. Wherever two or more corrupt practices had the same mean value, the one with the lowest standard deviation was assigned the highest ranking.

Mean ranking is further used to check the relative ranks of all potential corrupt practices. The relative ranks here means how much a particular corrupt practice is rated more or less frequent as compare to the rest of the corrupt practices.

5.4.2.2 One-Way ANOVA Test

ANOVA compares the means of two or more independent groups. It is a parametric test which is used to determine whether there are differences between the groups' means in the population (Cohen, 1969). One-way ANOVA was carried out to compare the means of respondents' groups (i.e. client, consultant, contractor, researcher). The results of one-way ANOVA were also verified using non-parametric tests. Parametric tests are significant tests which assume the data is normally distributed and there are no differences between variances of the populations (called homogeneity of variance) when two or more independent samples are being compared (Cohen, 1969). However, it has long been established that moderate violations of parametric assumptions have little or no effect on substantive conclusions in most instances (Cohen, 1969).

In addition, ANOVA is a fairly robust to violations of the normality assumption, particularly if the sample sizes (numbers in each group/category of the sample) are equal, or nearly equal, but less so for unequal (unbalanced) group sizes (Kirk, 1995; Lix et al., 1996; Maxwell and Delaney, 2004a). "Robust", here means that the assumption can be violated (a little) and still provide valid results. Indeed, if sample sizes are not small, even fairly skewed distributions – as long as groups are similarly skewed – are not always problematic (Sawilowsky and Clifford, 1992). In conclusion, non-normality does not affect Type-I error rate substantially (Maxwell and Delaney, 2004b). Therefore, researchers believe that ANOVA only requires approximately normal data and some argue that data can be even fairly skewed as long as the number of cases (e.g. participants) in each group is similar. Therefore, despite the violations to the normality, the use of ANOVA for ordinal data in the current study still provides reliable results.

Tests for homogeneity of the variances are extremely sensitive to non-normality of the data, however, this is offset somewhat by the robustness of ANOVA.

There are different tests to find the assumption of homogeneity of variances. Levene's of Equality of Variances was used in the present study for this purpose. The use of particular ANOVA (i.e., ordinary or Welch) depends on whether the assumption of homogeneity of variances is met or violated. The assumption of homogeneity of variance is met when Levene's test is not significant ($p > .05$). Consequently, the ordinary ANOVA is used to compare the means of different groups. The assumption of homogeneity of variance is not met when Levene's test result is statistically significant ($p \leq .05$). Consequently, the modified version of ANOVA i.e. Welch's ANOVA is used for comparison between groups.

After applying ANOVA, the F statistic ratio (i.e. between-groups mean square is divided by the within-groups mean square) is observed, which is used to test the null hypothesis. The calculated F value is compared with the F distribution to observe the significance level. The significance level is based on both the actual F value and on the degree of freedom for two mean squares. If the observed significance level is less than 0.01 or 0.05, the null hypothesis should be rejected. The 0.01 and 0.05 are equivalent to 1% and 5% significance level respectively. If the null hypothesis is true, two numbers (group means) should be close to each other. Therefore, the result of one-way ANOVA test is statistically significant at $p < .05$ i.e. group means are not equal in the population and at least one group mean is different to another group mean (this refers to the group population means and not the group sample means). To investigate further where exactly the difference lies (i.e. which particular groups are different from each other), a post-hoc test is used. The Tukey post-hoc test (also called the Tukey HSD test) is used when significant results are obtained using the ordinary ANOVA and Games-Howell post-hoc test is used when significant results are obtained using modified or Welch's ANOVA.

5.4.3 Reliability of the Data

One of the most widely used reliability coefficient is Cronbach's Alpha which is based on the 'internal consistency' of a test scale (Cronbach, 1951). The Cronbach's Alpha coefficients were calculated to test the reliability of the 5-point Likert scale used to collect survey data (Nunnally, 1978; Nunnally and

Bernstein, 1994). The test is based on the average correlation of the items within a test. For a perfectly reliable test, the correlation is 1.00, whereas, for a totally unreliable test the score is zero (Graham and Lilly, 1984). According to Nunnally, (1978) during the early stages of research, in order to save time and energy while working on an instrument which has only modest reliability and is being used for predictor tests or hypothesised measures of a construct, the purpose reliabilities of 0.7 or higher are adequate. Since the value of the coefficient alphas of all constructs were above 0.7 (as shown in Table 5.4) the overall scale is considered 'acceptable' indicating they all had reasonable internal consistency and reliability (George and Mallery, 2003; Nunnally, 1978; Nunnally and Bernstein, 1994).

Table 5-4: Test of the Cronbach's Alpha

Principal Construct	N	Cronbach's Alpha	
		Traditional	PPP
Pre-Tendering	5	0.820	0.710
Tendering	8	0.829	0.817
Post-Tendering	7	0.815	0.782
Lack of Transparency and Fairness	7 & 8	0.807	0.812
Lack of Professional Integrity	4	0.712	0.730
Manipulations to Procurement Rules and Contractual Obligations	8 & 7	0.837	0.769
Perceived Monitoring	5	0.869	
Perceived Accreditation	5	0.779	
Perceived Legal Bonds	2	0.763	
Perceived Feedback	3	0.801	
Perceived Cooperative Norms	10	0.832	

Note: N represents the number of sub-items in the Principal Constructs

5.5 Interview Survey for Qualitative Data Collection

According to Taylor et al., (2006) qualitative interviews allow one to “make meanings” from individual accounts and experiences. A qualitative method allows researcher an in-depth investigation of the subject being studied as compare to quantitative research method such as questionnaire surveys (Wellington, 2000).

According to Wellington, (2000:71);

“interviewing allows a researcher to investigate and prompt things that we cannot observe. We can probe an interviewee's thoughts, values, prejudices, perceptions, views, feelings and perspectives. We can also elicit their version or their account of situations, which they have lived or taught through his or her story”.

On the other hand, the use of interviews as a qualitative research method is criticised due to following disadvantages:

1. The most common disadvantages of interviews include time, cost, difficulty in analysing the data and the subjectivity. These difficulties were largely overcome by using a small sample from each group of respondents
2. The use of a small sample from each group, however, did not allow the generalisability of interview findings.
3. Interviews are also criticised for interviewees not receiving the same set of questions phrased in exactly the same way to obtain comparable data. Although the interviewees in some cases were asked to answer any questions that arose during the interviews, this disadvantage was largely minimised by planning a specific set of questions and communicating main themes with the interviewees in advance ahead of the interview through emails.
4. The use of telephone and Skype for some interviews in addition to face-to face interviews, added some inherent disadvantage of misunderstandings of the meanings or recording facial expressions. However, Skype reduced this aspect, but had issues in terms of the availability of a clear internet connection.

The use of interviews as a tool for collecting qualitative data has been deemed suitable keeping in mind the interpretive philosophy of study to investigate the causes of corruption in the infrastructure procurement process in Pakistan. Ribbins, (2007) guides about four aspects to be managed effectively during interviews in order to produce ‘rich and reliable data’.

- What is asked and how;
- The interviewer and the interviewing;
- Recording;
- Transcribing.

Keeping in mind, these four key elements, the first task was to set the interview objectives and to finalise the interview schedule. In order to achieve the intended objectives of the interviews, major themes and issues were explored through the literature review. This was done to develop the questions to guide the interviews and keep the conversation focused. Otherwise, during the semi-structured interviews, the interviewer has less control over the interviewees who may discuss the issues that are not within the scope of the research survey. The questions were designed in a way to enable interviewees to share “what is in (or on) their minds and avoid those that put things there” (Cohen et al., 2007). Three simple, short and open-ended questions were prepared for ease and understanding of the interviewees so that they could easily speak about their experiences.

The interviewees were asked following three open-ended questions:

1. What are the forms of corruption most associated with infrastructure procurement in Pakistan?
2. What are the causes that facilitate corruption in the infrastructure procurement process in Pakistan, and how?
3. Is it common to report procurement corruption and irregularities in Pakistan? If not, why?

These open-ended questions required unstructured responses and put no restrictions on the content and manner of the response. There were in addition two contextual questions regarding the length of participant’s experience and the nature of the projects they have been involved in the past or working currently.

5.5.1 Reliability and Validity of Data

The reliability of a research tool for data collection is judged by the extent to which the same findings/results are obtained in its repeated administration. Threats to reliability include interviewer bias or error, or interviewee/observer error. According to Saunders et al., (2009) reliability can be achieved by test/retest (possibly at different time or with different interviewers) by the consistency between the answers to different questions. According to Robson, (2011) use of more than one observer in carrying out the study guards against the threat of interviewees' bias. Robson, (2011) calls this strategy "observer-triangulation". Keeping in view these suggestions, asking broadly same questions to all the participants in the form of a semi-structured interview, and cross-checking the answers to these questions by different respondents, reliability was largely achieved.

In respect of the interviewer's bias in interviewing, every attempt was made to be impartial and to remove any bias that might have been detected in the interview, and in the data interpretation. This was achieved by not allowing the researcher to cause any interference in following her desires and expectations in terms of the results. All interview transcripts were returned to the respondents through emails to present them the interpretations made by the researcher to guard against interviewer bias and for respondent validation and reference. On receiving respondents' satisfaction about the interpretation of their conversation using interview transcripts, the interview transcripts were reviewed many times to ensure that the data were appropriately refined in order to carry the same sense.

The validity of a research tool is measured by judging if it measures or describes what it claimed to do i.e. relevance of research findings to the research questions (Saunders et al., 2009). According to Hussey and Hussey, (1997), there may be a trade-off between reliability and validity. Saunders et al., (2009) describes three types of validity in relation to the data collected using survey interviews:

- Content-related validity is achieved by the coverage of the required subject or study area while avoiding any confusions that may be caused by the collection of any irrelevant data.
- Criterion-related validity is achieved by making it sure as if the data accurately reflects the future behaviour.
- Construct validity is achieved by making it sure that the data relates to the analytical constructs.

Content validity is here limited by the available sample size, and this has to be recognised and any conclusions accompanied by an appropriate warning. While the results of this field research in the form of interview survey cannot be interpreted to represent the entire population, they may be still considered valid as a foundation for justifying further explorations. The possibility of misinterpreting or misrepresenting the data is minimised by following a semi-structured interview and presenting broadly the same questions to all the interviewers/participants. In addition, the objective of the interviews does not involve prediction, and therefore, the criterion validity is not relevant. Construct validity is comparatively straightforward as the key constructs are clearly defined for the purpose of this research as discussed under Sections 7.4, 7.5 and 7.6 in chapter Seven.

5.5.2 Sample

In addressing the first research objective (Section 1.4, Chapter One), the causes of corruption in infrastructure procurement in Pakistan were examined using an interpretive research method based upon analytic induction. Fifteen in-depth semi-structured interviews were undertaken with a focus group of participants who had high level of involvement in infrastructure procurement and inspection activities, experiences and responsibilities. A purposeful sample was obtained, with participants falling into the categories of project clients, consultants, contractors and researchers. These categories were chosen in advance in order to elicit different viewpoints and examine various perceived causes of corruption. Practitioners of infrastructure procurement in Pakistan, working at a senior level and authority in public procurement agencies and

research institutions were therefore targeted for recruitment. The variety in the nature of the participants was believed to provide a holistic view of causes of corruption in infrastructure procurement in Pakistan which had the potential for being eradicated or minimised.

The sample broke down into: 4 (27%) client representatives, 4 (27%) design consultants, 4 (27%) contractors, and 3 (20%) researchers; and the criteria for inclusion were:

- Having more than five years' experience of work on one or more procurement processes of infrastructure project(s) in Pakistan.
- Having actively been involved in research or inspection of public procurement processes.
- Having worked as an individual or a team member within a works organisation or body.

In order to establish whether the criteria for selection were met, each individual participant was initially asked to describe his or her working background. The complete detail of the respondents is kept confidential due to the sensitivity of the research topic, and hence anonymity is used while describing different situations in a way that does not affect the intended knowledge transfer.

5.5.3 Recruitment of the Sample for Interviews

A total of fifteen semi-structured interviews were conducted, some (n=7) face-to-face while others (n=8) on telephone/Skype. Interview participants had a high level of involvement in infrastructure procurement and inspection activities, experiences and responsibilities in Pakistan. The sample broke down into: 5 (33%) client representatives, 4 (27%) design consultants, 4 (27%) contractors, and 2 (13%) researchers. The profile of interview participants is shown in Table 5.5.

As no comprehensive database is maintained for procurement professionals in Pakistan except PEC's approved contractors' list, the participants in this study were identified through organizational and research studies conducted in a similar area. They were approached via social networking websites and emails.

Some agreed to take part in a face-to-face interview, others preferred a telephone interview, and some others preferred interviews on Skype.

Table 5-5: Interviewees' Profile

ID		Position of Interviewee	Name of Organization	Years of Experience
Client	IP1	Principal Commercial Analyst & Finance Officer	Public Works Department	Above 20 Years
	IP2	Technical Director	Public Works Department	10 Years
	IP3	Executive Director	Public Audit Department	Above 20 Years
	IP4	Director (Project Evaluation)	A Public Service Authority Managing PPPs	15 Years
	IP5	Head of the Major Projects	A Public Service Authority Managing PPPs	20 Years
Consultant	IP6	Contracts Manager	Management Consultant Firm	15 Years
	IP7	Director (Commercial & Legal)	Law Consultancy Firm	20 Years
	IP8	Senior Project Manager	Management Consultant Firm	15 Years
	IP9	Managing Director	Management Consultant Firm	20 Years
Contractor	IP10	Project Manager	Private Contractor	Above 20 Years
	IP11	Contracts Manager	Private Contractor	10 Years
	IP12	Project Director	A concessionaire	Above 20 years
	IP13	Senior Project Manager and Architect	Private Contractor	15 Years
Researcher	IP14	Head of Department	Education Department	20 Years
	IP15	Head of Department	Education Department	20 years

In respect of those who agreed to participate, they were asked some brief questions about their experience in infrastructure procurement process, especially concerning their exposure to avoid corruption in that process, to ensure that they met the inclusion criteria for the sample. In a few cases, participants did not fulfil the criteria, and consequently were not eligible to continue. In total, 30 professionals were approached before a final sample of 15 was obtained. As the consent of the participants was sought directly via emails, those who participated did so because of their personal motivation to share their experiences or observations voluntarily.

5.5.4 Limitations of the Qualitative Data

Studying corruption using qualitative research method certainly brings richer contextual understanding of corruption and the causes behind. However, such a contextualised understanding has an inherent limitation of making inferences to other contexts, and therefore, the generalisability of the results is limited here and should be taken cautiously.

5.5.5 Interviewing

The process of interviewing was not only challenging but was also an enjoyable experience. Having established the eligibility of fifteen interviewees, according to the criteria already presented under Section 5.5.2 in this chapter, appointments with all participants were booked to arrange a face-to-face interview or times for telephonic or Skype interviews. All participants were informed that interviews will be digitally recorded but told specifically that the information would be used only for research purposes. In most of the interviews, the formal conversation began with an explanation about the research and its purpose in the form of a briefing outline explaining the research objectives, and the commitment to confidentiality and anonymity along with the right of participant to withdraw at any point. It was really important to gain the confidence of the participants and making them comfortable, especially when the interviews were being digitally recorded.

The interviewees were also welcomed to ask any questions about the research or the interview itself. One participant did not wish to be digitally- recorded, which was respected and, therefore, notes were taken during the interview. The interviews lasted between 35-180 minutes (average 45 minutes). The variation was accounting for by several factors, the most prominent being whether the interview was conducted by telephone or Skype or face-to-face, how relevant the interview questions were to particular participants, and the content and the types and causes of corruption that were presented by the participants. Nine participants used mostly English throughout their conversation while others also moved between English and Urdu Languages. This trend of mixing English language while using Urdu language in conversation is due to various reasons.

Firstly, the language of official correspondence in Pakistan is English and practitioners or officials frequently use this language. Secondly, English is the medium of instruction in many of the schools, especially in urban areas, which also added to the English language capabilities of an individual participant. Thirdly, English is a compulsory subject up to the graduate level, and therefore, every person who is educated to graduate or a higher level has the exposure of the language (all the participants working at a higher level in industry have a Masters or higher degree). Fourthly, in urban areas, use of English words, phrases and even in Urdu sentences is quite prevalent and the participants were working in major cities, especially with one being the federal, and others being provincial capital cities.

At the beginning of each interview, the conversation was more structured, in order to collect demographic information, etc. After collecting this information, the actual semi-structured interview began to be conducted by using open-ended questions. After a question was asked, depending upon the answers, either the interviewer moved onto the next question, or took the opportunity to probe the situation and lengthen the discussion by asking unplanned questions if the participant had introduced something of interest in his response. During the early interviews, the main concern was to collect information by referring to different stages of the procurement process, but as the interview exercise progressed, similarities and differences in opinions and experience emerged from the participants, and it gradually became more apparent that there were commonly held views.

5.5.6 Transcription and Data Analysis

The interviews were transcribed using NCH Express Scrib software and then fully translated into English not verbatim but for ‘the sense’. A Microsoft Word document for every interview was developed. Therefore, transcription of the interviews was a two-phase process of transcription and translation. The translation was done by the researcher with 18 years of education in schools where the medium of instructions was English and also 5 years work experience in an institution where English was the official language. Additional help and feedback on translated scripts was obtained from a bilingual colleague in the

UK, who has proficiency in both Urdu and English languages and experience in translation.

The analysis of the interview data was done using the ‘conventional content analysis’ (Hsieh and Shannon, 2005) approach and the interview data was read several times to identify the codes or issues within each theme explored in interviews. The raw interview data which was originally divided into responses to the questions, probes and prompts representing the themes and issues, was considered as a whole for data analysis and identification of issues within each theme. In the next stage, a separate MS word document for each theme was established consisting of the issues and illustrative quotes from the interview data and also showing an allocated identity number for every respondent (IP1... IP15) to map out the spread of responses and representation of the views of different participants. Finally, the text was developed to be presented in Chapter 7 of Qualitative Data Analysis , which discusses all issues related to each question along with some of the representative quotes.

5.6 Framework Validation Survey

In order to validate the framework developed for corruption control from this research study, a questionnaire survey was conducted. This survey was based on a similar validation process conducted by Yeung, (2007) and Cheung, (2009). Yeung, (2007) adopted this questionnaire to validate the quality of the “Partnering Performance Index” model, whereas, Cheung, (2009) adopted the questionnaire to validate the “Best Practice Framework for Implementing PPP Projects in Hong Kong”. Six aspects regarding the framework were assessed. These included: appropriateness, objectivity, replicability, practicability, reliability and suitability. Using the questionnaire survey, the respondents were asked to rate these six aspects of the Framework of Corruption Control.

The survey respondents were first presented with the purpose of the questionnaire, some background information, instructions to complete the survey exercise, the process of procurement and corruption avoidance, and also the Corruption Control Framework developed in this research study. The respondents were asked to rate their extent of satisfaction for each of the six

validation aspects on a five point Likert Scale, where 1 represented “poor” and 5 represented “excellent”.

5.6.1 Respondents of the survey

There were two main criteria for selecting the survey respondents for this validation process. Firstly, the respondents needed to be working closely with infrastructure procurements, either with hands-on experience or in research. Secondly, the respondents needed to have a good amount of knowledge in the situation of conducting the infrastructure procurement process in Pakistan and are well aware of the vulnerabilities of the process to corruption. Therefore, the participants of interviews were approached as the first point of reference. A total of nine responses were collected.

5.7 Ethical Issues

Keeping in mind the sensitive nature of research, the research participants were to ensure openness while maintaining confidentiality. Therefore, several steps were taken to protect the research data and participants. First, an email was sent to all participants explaining the aim of the study, why they had been nominated to participate in the research while seeking their consent to participate. They were also explained how the confidentiality of the data collection would be maintained. These steps were taken for all participants who were approached for questionnaire survey and interviews. On receiving the participant’s agreement to take part in the research, the interview participants were informed that interviews will be digitally recorded but told specifically that the information would be used only for research purposes. Confidentiality was a key issue when asking questions about sensitive issues, such as corruption, the focus of this work. Surprisingly, perhaps, people diagnose and identify how corrupt systems works, as long as they can express their views confidentially while asking the questions about the system and not individuals. On the day of interviews, the matters of confidentiality and anonymity were also explained verbally to the participants along with the right of participant to withdraw at any point. Another issue was to maintain confidentiality in the write-up while providing a reliable account of what happened.

The names were changed to pseudonyms, including those for participants, companies and institutions. Furthermore, those participants who requested a copy of the research findings were assured that once complete, the research outcomes would be sent to them.

5.8 Summary

In this chapter the following was presented: a thorough discussion of the methodology used to conduct this research; the methods of data collection; the questionnaire survey and interview questions; issues like sample recruitment and validity of the data; and the techniques for statistical analysis has been discussed in addition to explaining the ethical issues concerning the research.

6 Quantitative Data Analysis & Discussion

6.1 Introduction

The public procurement of infrastructure projects is vulnerable to corruption, and there is great emphasis around the world on the need to curb corruption in this context. This chapter presents a comprehensive list of corrupt practices in the procurement of infrastructure projects, for both traditional and Public Private Partnership (PPP) is derived from corrupt practices observed during the different stages of the procurement process by experts and reported cases. The research involves an empirical investigation using questionnaire survey to identify, evaluate and compare the corrupt practices likely to occur during procurement of traditional and PPP infrastructure projects in Pakistan. It reveals the 20 most frequent corrupt practices in traditional and PPP infrastructure procurement in Pakistan. It finds that corruption occurs in different forms during any stage of the procurement process regardless of the type of procurement although the level is higher in traditional procurement than in the PPP. The corrupt practices have been further classified under three categories: (i) lack of transparency and fairness; (ii) lack of professional integrity/ethical behaviour, and (iii) manipulations to procurement rules and contractual obligations. The ranking of these categories reveals that lack of transparency and fairness is the key factor requiring prime attention in both, traditional and PPP routes of infrastructure procurement. This provides the basis for development of a framework for good procurement practices and to curb corruption.

Despite the wide acknowledgement of institutional trust and its perceived outcomes, few studies have been conducted into the institutional mechanisms that contribute to the building of that trust. A perception of corruption represents a betrayal of public trust, and causes a loss of confidence in state institutions, as well as the processes and the roles of public officials within those institutions (Anderson and Tverdova, 2003; Boehm and Olaya, 2006; Chang, 2013; Chang and Chu, 2006; della Porta, 2000; Doig and Theobald, 2000; Gould, 1991; Miller et al., 2005; Seligson, 2002; Shih, 2010).

Therefore, the choice of governance mechanisms and procedures during the infrastructure procurement process is important for shaping the perceptions of procurement participants towards the trustworthiness of the mechanisms followed. Following Zucker, (1986), McKnight et al., (1998), and McKnight and Chervany, (2001) typologies of trust, and Pavlou, (2002) typology of specific constructs that constitute institutional trust, this chapter also examines different institutional mechanisms that develop trust between procurement participants (i.e. procurement organisations and private contractors/bidders). The ability of these institutional structures to enhance the overall level of a procurement organisation's trust in the infrastructure procurement market lies in either their ability to remove fraudulent bidders/contractors from the market, either initially (e.g. accreditation) or subsequently (e.g. monitoring, legal bonds, cooperative norms). Consequently, when procurement organisations emphasise strategies to avoid corrupt practices and wrongdoings during the procurement process, it becomes an essential promoter of perceived institutional trust between the participants involved in the process.

6.2 Objectives of the Survey

The questionnaire survey was aimed at investigating the most frequent potential corrupt practices during traditional and PPP infrastructure procurement in Pakistan and stakeholders' perception of institutional trust-building mechanisms in context of infrastructure procurement in Pakistan. The significance of the knowledge of the top 20 most frequently occurring corrupt practices to practitioners is for them to determine the potential causes of corruption. This may help procurement regulators/monitors/administrators to take corrective measures before any of such events occur. In addition, proposed institutional trust-building mechanisms can be introduced to cater for any decline in institutional trust between the participants of the procurement process due to perceived level of corruption in this sector.

6.3 Ranking of Corrupt Practices

Based on the outcomes of the survey, 20 corrupt practices were identified during different stages of the procurement process i.e.; (1) pre-tendering which consists of procurement planning and the project design phase, (2) during

tendering, and (3) post-tendering which consists of contract administration and implementation. These corrupt practices and their relative ranks are shown in Table 6.1 below. The relative ranks show that how much a particular corrupt practice is rated more or less frequent as compare to the rest of the corrupt practices. In addition, Table 6.1 shows a comparison between the ranks of potential corrupt practices occurring during traditional and PPP infrastructure procurement process in Pakistan. Eighteen, of the total of 20 potential corrupt practices have been identified as similar for both the traditional and PPP approaches to the procurement of infrastructure projects in Pakistan. The remaining two potential corrupt practices are different in both types of procurement routes in Pakistan.

A detailed comparison of all the top 20 potential corrupt practices during traditional and PPP approaches to the procurement of infrastructure projects in Pakistan is given in Table 6.1. The survey evidence suggests that there is diversity in the type of potential corrupt practices prevalent during the procurement of infrastructure projects in Pakistan. Item 1, “to identify and prioritise projects based on the vested interests of parties involved” is at top of the list during traditional procurement (mean = 3.73) whereas the same item is ranked 17th (mean = 2.92) during PPP infrastructure procurement in Pakistan. Item 14, “to negotiate or renegotiate the contract by one party or several to secure more favourable terms” is at top of the list during PPP procurement (mean = 3.48) whereas the same item is ranked 4th during the traditional procurement (mean = 3.69) of infrastructure projects in Pakistan. Item 5, “to approve favourable environmental impact assessment/planning proposal” is ranked lowest in the list during traditional procurement (mean = 2.96) whereas the same item is ranked 19th during PPP infrastructure procurement (mean = 2.76), as rated by all types of respondent in Pakistan. Item 6 “to accept unsolicited bids leading to sub-optimal project design and construction” is ranked lowest in the list of PPP infrastructure procurement (mean = 2.74) whereas this item is not identified within the top 20 potential corrupt practices during the traditional procurement of infrastructure projects in Pakistan.

Table 6-1: Means Comparison and Ranking of Potential Corrupt Practices

Means Comparison & Ranking of Potential Corrupt Practices during Traditional & Public-Private-Partnership (PPP) Infrastructure Procurement Process										
<i>Question: Please rate following corrupt practices for their likelihood of occurrence during traditional and Public-Private-Partnership (PPP) infrastructure procurement process in Pakistan.</i>										
Phase	Q. No.	Potential Corrupt Practices	Traditional Procurement				Public Private Partnership (PPP)			
			Mean	Rank	F	Sig.	Mean	Rank	F	Sig.
Planning	1	To identify and prioritize projects based on vested interests of parties involved.	3.73	1	2.726	0.053	2.92	17	0.686	0.562
	2	To under-estimate initial project cost for planning approval by government.	3.62	6	1.161	0.327	2.80	18	1.327	0.267
Overall Corruption Rating during Planning Phase			3.68	1			2.86	4		
Design	3	To hire favourite consulting services for project feasibility study and preparation of specifications/bid documents.	3.21	16	0.493	0.687	3.25	5	1.366	0.255
	4	To decide land use & price (as agriculture, residential or commercial) based on vested interests of parties involved.	3.54	8	2.653	0.057	3.37	3	0.099	0.961
	5	To approve favourable environmental impact assessment/planning proposal.	2.96	20	1.504	0.223	2.76	19	0.892	0.447
Overall Corruption Rating during Design Phase			3.23	4			3.13	3		

Phase	Q. No.	Potential Corrupt Practices	Traditional Procurement				Public Private Partnership (PPP)			
			Mean	Rank	F	Sig.	Mean	Rank	F	Sig.
Tendering	6	To certify procurement process unnecessarily urgent to avoid requirement of competitive bidding procedure.	3.41	13	0.511	0.675	N/A			
		To accept unsolicited bids leading to sub-optimal project design and construction.	N/A				2.74	20	0.929	0.45
	7	To leak confidential inside information to help favourite bidder to prepare competitive bid.	3.52	9	0.22	0.88	3.36	4	1.949	0.124
	8	To set evaluation criteria to fit particular bidder.	3.71	3	1.673	0.183	3.18	7	1.365	0.267
	9	To prepare tender documents in a way to favour private contractor/consortium.	3.68	5	0.985	0.402	3.45	2	1.444	0.232
	10	To misrepresent the facts and revenues of private contractors/consortium during bidding process.	3.12	18	2.402	0.07	3.00	15	2.439	0.067
	11	To set up front company or as joint venture company or to create 'Fictitious Companies' to bid or allowing multiple bids under different names by same contractor to show competitive bidding process.	3.58	7	0.99	0.399	3.23	6	1.444	0.232
	12	To approve oversized or inflated cost of project.	3.51	10	1.226	0.302	3.17	9	2.137	0.098
	13	To award contract to favourite bidder.	3.71	2	0.53	0.663	2.99	16	0.819	0.485
Overall Corruption Rating during Tendering			3.53	2			3.14	2		

Phase	Q. No.	Potential Corrupt Practices	Traditional Procurement				Public Private Partnership (PPP)			
			Mean	Rank	F	Sig.	Mean	Rank	F	Sig.
Contract Implementation	14	To negotiate or renegotiate contract by one party or several to secure more favourable terms.	3.69	4	0.528	0.663	3.48	1	1.783	0.153
	15	To approve in advance/speedy payment claims for project works.	3.35	15	2.707	0.059	N/A			
		To award long term unjustified incentives to concessionaire/private consortium.	N/A				3.14	10	0.596	0.618
	16	To change subcontractor/allowing sub-letting of construction work to petty contractors.	3.16	17	0.4	0.753	3.17	8	0.187	0.905
	17	To approve construction work and services below standard specifications.	3.47	11	0.454	0.715	3.08	13	0.112	0.8
	18	To approve unjustified design and specification changes to create more variation orders.	3.45	12	0.092	0.965	3.08	12	0.928	0.429
	19	To approve unjustified extensions in project execution/financial closure deadlines.	3.06	19	0.879	0.38	3.13	11	1.451	0.23
	20	To approve claims for false invoices of non-supplied, inferior quality or inflated cost of construction material & equipment or unexecuted or exaggerated quantities of construction work.	3.37	14	1.067	0.365	3.05	14	0.545	0.653
Overall Corruption Rating during Contract Implementation			3.36	3			3.16	1		
Overall Mean Value			3.45				3.07			

6.3.1 Agreement of the Survey Respondents

To determine whether any differences in perception existed between different groups of respondents about potential corrupt practices during traditional/PPP infrastructure procurement in Pakistan, the following hypothesis was tested for all 20 potential corrupt practices using the One-Way ANOVA test:

Null Hypothesis: *There is no difference in respondents' perceptions w.r.t. their type (i.e. client, consultant, contractor, researcher) about potential corrupt practices during traditional/PPP infrastructure procurement in Pakistan.*

Alternate Hypothesis: *There is a difference in respondents' perceptions w.r.t. their type (i.e. client, consultant, contractor, researcher) about potential corrupt practices during traditional/PPP infrastructure procurement in Pakistan.*

According to ANOVA, no significant differences were found ($p > 0.05$) for all 20 potential corrupt practices likely to occur during traditional and PPP infrastructure procurement process in Pakistan, as shown in Table 6.1 by “F” and “Sig” values. Hence, the null hypothesis is true for all 20 corrupt practices indicating no overall difference in the various stakeholders' perceptions about the likelihood of occurrence of all 20 corrupt practices during traditional and PPP infrastructure procurement in Pakistan with respect to their types. This indicates the sample was reasonably representative of the population in terms of the demographic variables tested.

6.3.2 Comparison of Potential Corrupt Practices in the Pre-Tendering Phase

Table 6.2 show the relative rank comparison between the potential corrupt practices identified during traditional and PPP infrastructure procurement in Pakistan. The relative ranks mean that how much a particular corrupt practice is rated more or less frequent as compare to the rest of the corrupt practices. Of the top 20 potential corrupt practices identified during the procurement of infrastructure projects in Pakistan, two are likely to occur during the project planning phase and three during the project design phase, meaning that during

pre-tendering, five corrupt practices are identified. Many researchers find that corruption during public procurement typically takes place during the project planning phase (Achua, 2011; Boehm and Olaya, 2006; Tanzi, 1998) where a great variety of opportunities arise for corruption that can be sustained throughout the whole process of the ongoing project. Overall, corruption at this stage is regarded as ‘grand corruption’ for both, traditional and PPP infrastructure procurement (Klitgaard, 2012; Rose-Ackerman, 1999). Tanzi, (1998) referred to it as political corruption during budget preparation, and bureaucratic corruption during budget execution.

Table 6-2: Relative Ranks Relationship during Traditional and PPP Infrastructure Procurement

No.	Relative Ranks Relationship of Potential Corrupt Practices in Pre-Tendering Phase	Traditional	PPP
1	To identify and prioritize projects based on vested interests of parties involved.	1 st	17 th
2	To under-estimate initial project cost for planning approval by government.	6 th	18 th
3	To hire favourite consulting services for project feasibility study and preparation of specifications/bid documents.	16 th	5 th
4	To decide land use & price (as agriculture, residential or commercial) based on vested interests of parties involved.	8 th	3 rd
5	To approve favourable environmental impact assessment/planning proposal.	20 th	19 th

The comparison of mean score values for item 1 in Table 6.2 “to identify and prioritise projects based on the vested interests of parties involved” shows that this corrupt practice is occurring more frequently during traditional procurement than in PPP infrastructure procurement in Pakistan. Traditional projects are considered more vulnerable to this type of corruption which, when it becomes part of the decision-making system, results in compromised project identification and prioritisation due to the vested interests of politicians and other stakeholders involved in the process (Castalia, 2009; Kenny, 2007). The budgeting decisions are manipulated to select particular projects resulting in lower returns to government infrastructure investments (Kenny, 2006).

According to Cavill and Sohail, (2007a) projects are selected especially to benefit the political constituencies of parliamentarians (MPAs) or to win or appease voters, or for gaining personal benefits. This results in unnecessary project selection instead of identifying and prioritising on the basis of national or regional needs or availability of finances (Cavill and Sohail, 2007a).

Projects are also prioritised to win popularity for the ruling political party in particular areas. Especially, the planning is done in favour of high value infrastructure (white elephant projects) at the expense of GDP growth (Cavill and Sohail, 2007b). It is also observed that high corruption countries invest more in physical assets than in the human capital (Croix et al., 2006). “If corruption is endemic in large public undertakings, it will give officials incentives to create extra unneeded projects to hide monopoly gains to be split between government officials and their private sector counterparts. These projects may be artificially designed as special purpose deals to make monitoring difficult, especially by the aid or grant agencies and like aid agencies and lending organisations. In such cases the loss to society is not just the bribes paid; it is the total of wasted resources spent on the project” (Rose-Ackerman and Truex, 2012:21-22). According to Tanzi and Davoodi, (1997a); Mauro, (1995); and Kenny, (2006) large and new construction projects are preferred to health and education projects at the expense of the interests of the poor, while spending on operation and maintenance is neglected despite being a key factor in preserving the economic value of infrastructure.

An argument frequently given for the selection of such unnecessary or white elephant projects is that developing countries are always in need of a project due to the huge demand and supply gap. The same type of corruption is also expected in the case of PPP infrastructure procurement, but is considered relatively less likely to occur than in traditional procurement. According to (Kenny, 2007) PPP arrangements may have reduced the potential for the selection of projects with low return because the stakeholders need to be satisfied about the financial viability of the projects being considered.

Item 2 in Table 6.2, “to under-estimate initial project cost for planning approval by government” is ranked 6th (mean = 3.62) during traditional procurement and

18th (mean = 2.80) during PPP procurement of infrastructure projects, by all types of respondent in Pakistan. The comparison of these mean score values shows that this corrupt practice is occurring more frequently in the traditional approach to procurement than in PPP infrastructure procurement in Pakistan. “The project cost estimates are prepared for assessing the fund requirement as well as economic viability of the project. Therefore, the cost estimates must be realistic as far as possible” (Das, 2011:158). In order to influence the project selection procedure at the planning stage, inaccurate cost estimates are produced by incorporating mistakes and fictitious positions within the project calculations and design (OECD, 2007a), thus leading to inaccurate policy requirements.

These hidden possibilities provide the opportunity to expand the contract at a later stage so that economies can accrue to the private contractors/consortia. Flyvbjerg et al., (2002) studied 258 PPP transportation infrastructure projects of different types, in different regions, and with different timings. They observed that deliberate cost under-estimates were used to decide whether such projects should be built or not, and that lies were told for a purpose. Basically, for public works projects, the cost estimations were done on the lower side initially to secure planning approval from the government. In respect of public works projects, in Pakistan, Tahir, (2005) observed that project inclusion in Pakistan’s Public Sector Development Programme (PSDP) is a deliberate effort to press for token allocation based on the under-estimation of the initial project cost which is done in the hope that inclusion will enable a larger allocation subsequently.

Item 3 in Table 6.2 “to hire favourite consulting services for project feasibility study and preparation of specifications/bid documents” is ranked 16th (mean = 3.21) during traditional procurement and 5th (mean = 3.25) during the PPP infrastructure procurement process. Hence, this corrupt practice emerges to occur more frequently during PPP procurement than in the traditional procurement of infrastructure projects in Pakistan. The hiring of consulting services involves more discretionary powers of public officials when requirements are ambiguous and past satisfactory experience is given priority.

Corrupt consulting services, and a particular consultant may be hired repeatedly by certain public works departments (Cavill and Sohail, 2007b).

Item 4 in Table 6.2 “to decide land use and price (as agriculture, residential or commercial) based on the vested interests of parties involved” is ranked 8th (mean = 3.54) during traditional procurement and 3rd (mean = 3.37) during PPP infrastructure procurement. Consequently, this corrupt practice occurs more frequently in the traditional approach to procurement than in the PPP approach to infrastructure procurement in Pakistan. Many researchers observe that decisions about land use and price involve discretion on the part of public officials and are, therefore, vulnerable to corruption during both the traditional and PPP infrastructure procurement processes (Cobarzan and Hamlin, 2005). Specifically, different ways exist for stakeholders to try to reduce their land costs. For example, private contractors/consortia may bribe public officials to reduce their costs when they cannot afford to buy the land at its actual selling price. Also, decisions regarding whether a particular piece of land can be used for agricultural, residential or commercial purposes, have a high risk of being subject to corruption due to the discretionary powers of public officials involved in such decision-making.

Item 5 in Table 6.2 “to approve favourable environmental impact assessment/planning proposal” is ranked 20th (mean = 2.96) during traditional procurement and 19th (mean = 2.76) during PPP infrastructure procurement. The comparison of mean score values shows that this corrupt practice is occurring more frequently during traditional procurement than in PPP infrastructure procurement in Pakistan. This type of corruption has been observed by many researchers during procurement of infrastructure projects (Cavill and Sohail, 2007b). The planning approval or approval of the environmental impact assessment is considered less vulnerable to corruption by all types of respondent in Pakistan possibly because the country has yet to formulate strict laws and regulations in this area.

6.3.3 Comparison of Potential Corrupt Practices in the Tendering Phase

Table 6.3 shows the relative rank comparison between the potential corrupt practices identified during traditional and PPP infrastructure procurement in

Pakistan. The relative ranks mean that how much a particular corrupt practice is rated more or less frequent as compare to the rest of the corrupt practices. The majority of the 20 corrupt practices identified are seen to occur during the project tendering and bidder selection phase. Item 6 in Table 6.3 “to certify procurement process unnecessarily urgent to avoid requirement of competitive bidding and other routine procedures during traditional procurement” is ranked 13th (mean = 3.41) in the traditional approach to the procurement of infrastructure projects, but does not feature at all in the PPP approach in Pakistan.

This may be because the PPP is still a new mode of procurement in Pakistan and lacks competition. Søreide, (2002; citing Moody-Stuart, 1997:16-17) explains that “the need for a very detailed specification and proper legal formality in tender documents, as well as the time required for bidding and adjudication of bids, certainly makes ICB (International Competitive Bidding) a time-consuming business”. This delay may become a legitimate excuse for officials to avoid a competitive bidding procedure and deviate from rules, thereby hiding corruption and eliminating competition from the beginning. The decision of whether to contract out or not, provides greater discretion and, therefore, the opportunity for corruption (Boehm et al., 2005).

Table 6-3: Relative Ranks Relationship during Traditional and PPP Infrastructure Procurement

No.	Relative Ranks Relationship of Potential Corrupt Practices in Tendering Phase	Traditional	PPP
6	To certify procurement process unnecessarily urgent to avoid requirement of competitive bidding and other routine procedures during traditional procurement.	13 th	N/A
7	To accept unsolicited bids leading to sub-optimal project design and construction.	N/A	20 th
8	To leak confidential inside information to help favourite bidder to prepare competitive bid.	9 th	4 th
9	To set evaluation criteria to fit particular bidder.	3 rd	7 th
10	To prepare tender documents in a way to favour private contractor/consortium.	5 th	2 nd
11	To misrepresent the facts and revenues of private consortium during PPP projects.	18 th	15 th
12	To set up front company or as joint venture company or to create 'Fictitious Companies' to bid or allowing multiple bids under different names by same contractor to show competitive bidding process.	7 th	6 th
13	To approve oversized or inflated cost of project.	10 th	9 th
	To award contract to favourite bidder.	2 nd	16 th

Projects are eligible for sole-source-contracts in case of emergencies, for expediency, and or because of various types of built-in subterfuge, or in cases where national security interests are at stake. In such situations, it is common for public officials to declare ‘emergencies’ and call for ‘sole-source-contracts/single source/no bid’ to avoid the competitive bidding process (Klitgaard, 2012; OECD, 2007a). Although this kind of procurement is not proof of corruption in itself, such procedures lend themselves more easily to hiding corruption. On the other hand, competitive bidding cannot be a guarantee of integrity. “Non-competitive procurement contracts have been identified as a source of concern for reason of transparency, democratic oversight, value for money and corruption risks” (OECD, 2007a:20-21). In the absence of any competition, especially for lucrative projects, contractors are keen to remain the favoured choice and try to influence or bribe key officials who are involved in the award decision. And without any evaluation guidance and monitoring provisions, the individual preferences of those officials may become part of the decision-making system very easily as they hold the maximum discretionary powers. The award of such contracts continues through ongoing long-term

relationships between contractors and procurement officials. (Søreide, 2002) refers to (della Porta and Vannucci, 2001) who describe a “culture of emergency” that developed in Italy, and which resulted in “a systematic search for the exceptionality” and a frequent use of the “mechanism of arbitrary choice in public contracting”.

Item 6 in Table 6.3 “to accept unsolicited bids leading to sub-optimal project design and construction” is ranked 20th (mean = 2.74) during the procurement of PPP infrastructure projects but is not identified within the top 20 potential corrupt practices during traditional procurement of infrastructure projects in Pakistan. This type of corruption has been observed by many researchers during the procurement of infrastructure projects (Bueb and Ehlermann-Cache, 2005; World Bank, 2013). Initially by showing a lower project price, the private sector receives government approval for the project, resulting in sub-optimal project design and construction costs. The lowest rank of this item during PPP infrastructure procurement may be because the PPP is a relatively new mode of infrastructure procurement in Pakistan, and therefore, the government is trying to encourage private investment by showing more flexibility in accepting unsolicited bids. Also, competition is less, and hence, the country’s flexible approach in treating and accepting unsolicited bids might have resulted in sub-optimal project design and construction.

Item 7 in Table 6.3 “to leak confidential inside information to help the favourite bidder to prepare a competitive bid” is ranked 9th (mean = 3.52) during traditional procurement and 4th (mean = 3.36) during PPP infrastructure procurement in Pakistan. Hence, this is happening more frequently during traditional procurement than in the PPP approach to infrastructure procurement in Pakistan. This type of corruption is ranked much higher and comes within the top 10 potential corrupt practices during the procurement of infrastructure projects in Pakistan irrespective of the mode of procurement. Public officials hold confidential bids and project information due to their public position, which they may abuse by leaking that information in return for bribes/unofficial payments by private contractors/consortia (Boehm and Olaya, 2006; OECD, 2007a; Søreide, 2002). There are many ways in which public officials holding

such inside information can obtain personal gains. Indeed, it is considered automatic for public officials to be approached in this way, and for the only real business to be concerning the size of the bribe. A bidder aware in advance of bid evaluation criteria, may obtain the contract formally by meeting all the rules and requirements, and without any irregularities (della Porta and Vannucci, 2001). Additionally, a bidder who gains confidential inside information about others' bids is always in a better position to improve his contractual terms and conditions. "A company holding a bid below those of the competitors may use the information to bargain an 'uplift', a higher price without technical improvements. And when the winning bid is high (to ensure profit) the company may bargain to reduce the contractual Obligations" (Søreide, 2002:16). Søreide, (2002) also refers to Andvig, (1995) who observes that 'information brokers' operate between the state and companies involved in selling and buying facts and figures.

Item 8 in Table 6.3 "to set evaluation criteria to fit a particular bidder" is ranked 3rd (mean = 3.71) during traditional procurement and 7th (mean = 3.18) during PPP infrastructure procurement in Pakistan, thereby revealing that the prevalence of this corruption practice is more during traditional procurement than in the PPP approach. In fact, this type of corruption falls within the top 10 ten most likely corrupt practices in both modes of procurement of infrastructure projects in Pakistan. And it has been identified by many researchers as present during the procurement of infrastructure projects elsewhere (Bueb and Ehlermann-Cache, 2005; OECD, 2007a; Søreide, 2002; Steets, 2001b). Project parameters such as technical value, times of execution, and costs of utilisation, can be treated subjectively while setting the bid evaluation criteria, since when output specifications are not clearly detailed and public preferences are ambiguous, it is difficult to control favouritism at this stage. Public officials may formulate requirements and include such features in bid evaluation and participations criteria which are only likely to be met by a few bidders, thereby building favouritism into the process and constraining the entry of other bidders into the market. Furthermore, the specific features and requirements that officials might introduce may have no relevance to the project. According to Klitgaard, (2012) even when the procurement process is competitive, abuses

spread. The evaluation of price and quality is susceptible to corruption when the weights for technical and financial bids are decided on the judgements of the officials carrying out the process (Søreide, 2002), since corrupt officials may request particular qualifications or may place too much weight on one particular criterion such that only the favourite bidder can comply. Using such tactics, the favourite bidder is able to offer the lowest bid price and hence, the subsequent award to such bidder becomes defensible by the contract awarding authorities. The subjective assessments of public officials leave much room for corruption, especially when new and innovative technologies are considered while setting the evaluation criteria, there is more opportunity (Burguet and Che, 2004).

Item 9 in Table 6.3 “to prepare tender documents in a way to favour a private contractor/consortium” is ranked 5th (mean = 3.68) during traditional procurement and 2nd (mean = 3.45) during PPP infrastructure procurement in Pakistan, indicating that this practice is more frequently to occur during traditional procurement than in PPP arrangements in Pakistan. However, this type of corruption comes within the top 10 potential corrupt practices in Pakistan, irrespective of the mode, and the literature confirms its prevalence (Kenny, 2007; Klitgaard, 2012; OECD, 2007a). Tender documents are prepared in such a way that unclear or ambiguous clauses may be included or miscalculations purposely made to hide mistakes in project specifications, or insufficient explanations are provided for tender arrangements thereby leading to defective project terms of reference. Any of these faults may result in the exclusion of large numbers of bidders or in the award being made to the bidder who is familiar with these clauses and conditions. Tender requirement and specifications are tailored to enhance the chances of the favoured bidder or to disadvantage others (Boehm and Olaya, 2006; Klitgaard, 2012). The type of opening left by such corruption can be used conveniently at a later stage in the project to claim increased costs and favourable contract terms for the private contractor/consortium. Consequently, this type of corruption not only results in increased price of infrastructure but also reduces the quality of construction work and provides a lesser return on government investments (Kenny, 2007).

Item 10 in Table 6.3 “to misrepresent the facts and revenues of private consortia during PPP projects” is ranked 18th (mean = 3.12) in traditional procurement and 15th (mean = 3.00) in PPP infrastructure procurement in Pakistan, showing that the frequency of it happening is greater in the traditional than in the PPP approach in Pakistan. This type of corruption is ranked within the top 10 potential corrupt practices in both traditional and PPP arrangements in Pakistan, and is seen because public officials may misuse their position in return for bribes to misrepresent the facts and the financial position of the bidders. Though not very easy to commit, this type of corrupt behaviour is possible in fragmented regulatory regimes where departments are not inter-connected. False completion certificates in respect of previous work, and fraudulent tax returns can be submitted in collusion with public officials who deliberately do not verify such certificates or delay their verification until the contract is awarded, when such verifications are forgotten matters.

Item 11 in Table 6.3 “to set up a front company or a joint venture company or to create fictitious companies to bid or allowing multiple bids under different names by the same contractor to show competitive bidding process” is ranked 7th (mean = 3.58) during the traditional method of procurement of traditional infrastructure projects, and 6th (mean = 3.23) in the PPP approach in Pakistan, revealing that such behaviour is more common in the former type of arrangement according to mean values comparison. The competitive bidding process appears more real when large numbers of companies are bidding for the tender. However, such bidders may not be real competitors (de Jong et al., 2009; della Porta et al., 2002; GoP/NAB, 2002; OECD, 2007a; Søreide, 2002). It is common for public officials, especially in high ranks, to establish front companies or a legitimate joint venture for a project, or indeed to create fictitious companies to bid or to allow multiple bids by the same contractor under different names (de Jong et al., 2009; GoP/NAB, 2002; OECD, 2007a). Front companies usually do not have a history of doing successful work and often act as a ‘local agent’ for a project, and not as one of the key producers of the work (de Jong et al., 2009). Such companies are newly established by government officials who subsequently receive their profits.

The same officials, if they become part of a project implementation team, may have a voice in awarding the work to the front company. It is also possible for these front companies to be legitimate joint venture enterprises especially formed for a project. The tender invitation may also be sent to a limited number of companies or to companies with different areas of specialisation or without past experience in the relevant field (della Porta et al., 2002; OECD, 2007a; Søreide, 2002), thereby meaning that any bids they may submit do not compare favourably with those of other companies (the favoured ones).

Item 12 in Table 6.3 “to approve over-designed or inflated cost of project” is ranked 10th (mean = 3.51) during traditional procurement and 9th (mean = 3.17) during PPP infrastructure procurement in Pakistan, indicating that this corrupt practice is more frequent during the former rather than the latter approach to infrastructure procurement in Pakistan. Private contractors/consortia submit front-loaded bids or exaggerated quantities or bids with repeated items in order to gain approval for an over-designed project in return for paying bribes to public officials. The private contractors also establish cartels or join together to submit inflated bids, which public officials subsequently approve even when the lowest bid is higher than the estimated bid.

Item 13 in Table 6.3 “to award the contract to the favourite bidder” is ranked 2nd (mean = 3.71) during traditional procurement and 16th (mean = 2.99) during PPP infrastructure procurement in Pakistan, revealing a definite greater tendency for this corrupt practice to occur more in the traditional as opposed to the PPP approach. It occurs when private contractors/consortia bribe public officials for the award of contract, as indicated by many researchers (Achua, 2011; Bray, 2005; Bueb and Ehlermann-Cache, 2005; Butterworth and Harpe, 2009; Davis, 2004; de Jong et al., 2009; Kenny, 2007, 2006; Soreide, 2002; Steets, 2001b), and it represents an additional entry barrier affecting competition negatively. Project parameters like technical value, times of execution, and costs of utilisation, can be treated subjectively during the consideration of which company will be awarded the contract. Discretionary judgements can be made, for instance, regarding the design and architectural values of the project, and it becomes difficult to exercise control over acts of

favouritism when output specifications are not clearly defined and public preferences are ambiguous.

Corrupt officials may use their discretionary judgements while evaluating competitors to decide the contract award (Klitgaard, 2012). This type of corruption not only results in increased price of infrastructure but also reduces the quality of construction work such that it may fall below specified standards and provide a lesser return on government investments (Kenny, 2007; Tanzi and Davoodi, 1997b). According to Butterworth and de la Harpe, (2009) the competitive tender process, despite being the best available norm for procuring infrastructure projects, encourages a ‘winner takes all’ mentality where some bidders may bribe officials in order to gain advantage over others. Therefore, instead of a competitive bidder winning the contract, the bidder with the most knowledge of other bids, or with the best governmental connections, has the best chance to win (Søreide, 2002). In such cases, a bribe may be used not only to make an award to a company that does not deserve it, but also to readjust the bids to a lower price once they are placed (Boehm and Olaya, 2006).

6.3.4 Comparison of Potential Corrupt Practices in the Post-Tendering Phase

Table 6.4 shows the relative rank comparison between the potential corrupt practices identified during traditional and PPP infrastructure procurement in Pakistan. The relative ranks mean that how much a particular corrupt practice is rated more or less frequent as compare to the rest of the corrupt practices. Many researchers find that corruption during public procurement typically takes place during the project execution stages (Achua, 2011; Boehm and Olaya, 2006; Tanzi, 1998). Item 14 in Table 6.4 “to negotiate or renegotiate the contract by one party or several to secure more favourable terms” is ranked 4th (mean = 3.69) during traditional procurement and at the top of the list (mean = 3.48) during PPP infrastructure procurement in Pakistan. Though ranked lower, the comparison of mean score values shows that this corrupt practice is occurring more frequently during traditional procurement than in PPP infrastructure procurement in Pakistan.

Researchers have found that private contractors/consortia bribe government officials to negotiate or renegotiate contracts in order to secure more favourable contract terms or to seek additional financial support from the public sector (Boehm and Olaya, 2006; Brenck et al., 2005; Kenny, 2007; Klitgaard, 2012). The conferring bargaining power at both ends, public and private sector, may be misused during contract negotiations or renegotiations. Private contractors/consortia may bribe government officials to alter contract terms in their favour (de Jong et al., 2009; Klitgaard, 2012). Suspicions of corruption arise when there is an excessive number of dubious renegotiations of the original contract or a history of a large number of government-led renegotiated contracts (Andres et al., 2008; Guasch et al., 2007).

Change-requirements is one reason given for contract renegotiations. However, another explanation for such renegotiations is given by Klitgaard, (2012:7) who notes the reason as being “the corrupt exploitation of the opportunities for bilateral negotiations, where changing requirements can be faked and the resulting cost increases can be corruptly shared”.

Table 6-4: Relative Ranks Relationship during Traditional and PPP Infrastructure Procurement

No.	Relative Ranks Relationship of Potential Corrupt Practices in Post-Tendering Phase	Traditional	PPP
14	To negotiate or renegotiate contract by one party or several to secure more favourable terms.	4 th	1 st
15	To approve in advance/speedy payment claims for project works.	15 th	N/A
	To award long term unjustified incentives to concessionaire/private consortium.	N/A	10 th
16	To change subcontractor/allowing sub-letting of construction work to petty contractors.	17 th	8 th
17	To approve construction work and services below standard specifications.	11 th	13 th
18	To approve unjustified design and specification changes to create more variation orders.	12 th	12 th
19	To approve unjustified extensions in project execution/financial closure deadlines.	19 th	11 th
20	To approve claims for false invoices of non-supplied, inferior quality or inflated cost of construction material & equipment or unexecuted or exaggerated quantities of construction work.	14 th	14 th

Developing countries which try to attract foreign investments are in a particularly weak position during renegotiations as their reputation is at stake in case the concession company undergoes bankruptcy. Without renegotiations, the private consortium may also overcharge for its services in order to recover its costs or to inflate profits. This is a very common corrupt practice by government officials because it is easy to perform, difficult to detect, and very lucrative. These lucrative amendments result in lowering construction companies' costs, and in increasing their revenues.

Item 15 in Table 6.4 “to approve in advance/speedy payment claims for project payments” is ranked 15th (mean = 3.35) during traditional procurement, but does not feature within the top 20 potential corrupt practices during PPP infrastructure procurement in Pakistan. Public officials delay project payments to obtain bribes, especially in developing countries (della Porta and Vannucci, 2001; Jain, 1998; Vittal, 2002). They also cause such delays if the promised bribes from the contractor within the private sector are not forthcoming (Søreide, 2002). Public officials can fabricate justifications for refusing or withholding project payments in order to obtain bribes or as punishment for construction companies not paying the bribes they had promised. In the absence of effective complaints procedure, disputes between project stakeholders can arise, implicating the project consulting/advisory services as well. Public officials may implicate other stakeholders in the submission of incorrect or inflated billing claims, concealment of documents, the supply of false witness statements or blackmailing of witnesses, etc. Therefore, it is common for public officials to demand a ‘facilitation payment’ for on-time approval of project payment claims.

Item 15 in Table 6.4 “to award long-term unjustified incentives to concessionaire/private consortia” is ranked 10th (mean = 3.14) during PPP infrastructure procurement in Pakistan, but not identified within the top 20 potential corrupt practices during the traditional mode of infrastructure procurement. Private investors always seek to reduce their costs while increasing profits, and hence, try to reduce the costs imposed on them by the government in the form of taxes, fees, and regulations. Investors also bribe

public officials to obtain biased decisions in the award of subsidies, long-term concessions, free leasing, credit with interest below market rates, or excessive toll collection etc. (Cobarzan and Hamlin, 2005; Søreide, 2002; World Bank, 2013). That is why there is a strong perception among all types of respondent in Pakistan that the private sector is awarded unjustified long-term incentives during PPP procurement of infrastructure projects. As the PPP is still a new mode of procurement in Pakistan, government agencies might be more flexible with the private sector in awarding more incentives in return for investment in national infrastructure projects. This might account for stakeholders' perception that the government provides unjustified benefits to the private sector.

Item 16 in Table 6.4 “to change sub-contractors/allow sub-letting of construction work to petty contractors” is ranked 17th (mean = 3.16) during traditional procurement and 8th (mean = 3.17) during PPP infrastructure procurement in Pakistan. This shows that this particular corrupt practice is occurring more frequently during PPP procurement than in the traditional mode. Contracts are actually awarded to established private contractors, who in turn, may sub-contract some of the work to petty/smaller contractors (Gahlot, 2007). The contractors claim for running project payments based on the progress of work and materials brought to the site. In order to complete the project work within the stipulated time and cost, the private contractor/consortium may sub-contract the work to petty contractors, and they may charge less. Such petty contractors are often not registered constructors, but may nonetheless be responsible for a significant part of the project construction work. This scenario is especially common in developing countries (Transparency International, 2005).

Item 17 in Table 6.4 “to approve construction work and services below standard specifications” is ranked 11th (mean = 3.47) during traditional procurement and 13th (mean = 3.08) during PPP infrastructure procurement in Pakistan. The comparison of mean score values shows that the frequency of occurrence of this corrupt practice is greater during traditional procurement than in PPP infrastructure procurement in Pakistan. Many researchers have observed this type of corruption during the contract implementation stage when private

contractors/consortia try to lower their cost by non-compliance with the required construction standards, resulting in lower quality infrastructure (Boehm and Olaya, 2006; della Porta and Vannucci, 2001; Kaufmann et al., 2005; Kenny, 2007; Tanzi and Davoodi, 1998). The private contractors/consortia bribe public officials to lessen their controls on project monitoring and impunity in respect of non-compliance with specified construction standards. They find it easier to bribe public officials rather than to spend on efforts to achieve the required standards. Clearly, for them, the project becomes more profitable as its quality is lowered without (short-term) risk as expenditures reduce. This might also result in early project completion, and public officials ease the expected penalties for such behaviour in return for early completion. According to Boehm and Olaya, (2006) there is a vicious circle between corruption and poor quality. Firstly, the cost of corruption (bribing the monitor) is compensated by lower quality; secondly, if the winner won through corruption, he may benefit from his investment in the attempt to gain corrupt knowledge and relations, and continue with corrupt strategies during the contract implementation, thereby perpetuating all the associated inefficiencies. The argument for such continued behaviour is straightforward, since having been shown to be successful at the start of a project, there is every encouragement to extend its use. The outcome, however, of this spiral of poor quality is that it dramatically reduces infrastructure life spans, by one-half or more (Kenny, 2010).

Item 18 in Table 6.4 “to approve unjustified design and specification changes to create more variation orders” is ranked 12th (mean = 3.45) in the list of potential corrupt practices during traditional procurement and also 12th (mean = 3.08) during PPP infrastructure procurement in Pakistan. Though ranked the same, the comparison of mean score values shows that the frequency of occurrence of this corrupt practice is greater during traditional procurement than in PPP arrangements. Researchers have observed that public officials regularly approve changes in initial project work or supplementary works which are not actually required, in exchange for bribes (della Porta and Vannucci, 2001; Søreide, 2002).

The reasons provided for such changes can be the occurrence of new events or conditions found after the contract was approved. Such changes are particularly likely to occur for ill-planned or poorly projected projects, and they provide ample opportunities to private contractors/consortia to manipulate the decisions regarding alterations or additions to the original project work. These variations increase profits, especially when rates for supplementary works are contractual.

The private contractors/consortia executing project work, may capitalise upon the lack of professional skills possessed by government officials. In this situation, it becomes more important for private contractors/consortia to win a public procurement contract when they are aware of the deficiencies of initial project work and can predict the nature, level and dimension of the likely future changes and variations. The private contractors/consortia may bribe public officials to win the contract on an inferior bid offer in return for promises of changes and additions to the work. Such bribes may also be offered even after the start of project work.

Item 19 in Table 6.4 “to approve unjustified extensions in project execution/financial closure deadlines” is ranked 19th (mean = 3.06) during traditional procurement and 11th (mean = 3.13) during PPP infrastructure procurement in Pakistan. The comparison of mean score values shows that the frequency of this corrupt practice is greater during PPP procurement than in the traditional mode where it falls outside the top 10 potential corrupt practices in both modes of procurement in Pakistan. Private contractors bribe public officials to grant extensions in project execution, or in case of the PPP projects, financial closure deadlines. This is to avoid penalties which the private sector may face for failure to meet project deadlines (Søreide, 2002).

Item 20 in Table 6.4 “to approve claims for false invoices of non-supplied, inferior quality or inflated cost of construction material and equipment or unexecuted or exaggerated quantities of construction work” is ranked 14th (mean = 3.37) during traditional and also 14th (mean = 3.05) during PPP infrastructure procurement in Pakistan. Though ranked in the same position, the comparison of mean score values shows that the frequency of this practice occurring is greater in traditional procurement than in the PPP mode.

Researchers have found that private contractors/consortia pay bribes to government officials to approve claims for fake invoices related to goods and services that are either never delivered or supplied at inflated cost, or for supplying inferior quality material than specified, and billing lesser paid employees on higher rates, or charging for unexecuted or exaggerated quantities of material (Boehm and Olaya, 2006; de Jong et al., 2009; Kenny, 2007; Klitgaard, 2012). The private contractors/consortia defraud project budgets through these claims which they make in order to recover the cost of bribes to the public officials and/or to increase revenues. Benjamin Olken, (2007) study of monitoring corruption in Indonesia's road construction industry found that either the purchased quantities were lower or the construction material was stolen. Over-estimation of construction work and material is done to inflate the overall project value and the excess profits are shared between the stakeholders involved in the process (Kenny, 2006; Rose-Ackerman, 1999).

6.3.5 Overall Corruption Prevalence during Traditional and PPP Infrastructure Procurement Process

A mean score value at each individual stage of procurement process was calculated using mean values of potential corrupt practices identified during that stage. This mean value was used to find the rating of overall prevalence of corruption at each individual stage of the procurement process during traditional and PPP infrastructure procurement. A total mean score value was also calculated using the mean score values at each individual stage of the procurement process to find an overall rating of corruption prevalence during traditional and PPP infrastructure procurement. A comparison of these mean values is shown in Table 6.5.

Table 6-5: Overall Means Comparison

Overall Means Comparison during Traditional & Public-Private-Partnership (PPP) Infrastructure Procurement Process				
Phase of Procurement Process	<i>Traditional</i>		<i>PPP</i>	
	Mean	Rank	Mean	Rank
Overall Corruption Rating during Planning Phase	3.68	1	2.86	4
Overall Corruption Rating during Design Phase	3.23	4	3.13	3
Overall Corruption Rating during Tendering	3.53	2	3.14	2
Overall Corruption Rating during Contract Implementation	3.36	3	3.16	1
Overall Mean Value	3.45		3.07	

The analysis indicates that the rating of corruption during all stages of infrastructure procurement was lower during PPP route of procurement as compare to traditional infrastructure procurement. In addition, the overall rating of corruption is rated lower during PPP infrastructure procurement (mean = 3.07) than in traditional route of infrastructure procurement (mean = 3.45) in Pakistan. This evidence suggests that both types of procurement are vulnerable to corruption, however, the level of corruption during PPP infrastructure procurement is lower than in traditional procurement of infrastructure projects in Pakistan. Moreover, these findings suggests that all 20 corrupt practices are equally relevant for the comparison between traditional and PPP routes of infrastructure procurement in the given context.

6.4 Categorisation of Corrupt Practices

Based on the concepts in literature and on the outcomes of personal interviews with a focus group of practitioners in infrastructure procurement in Pakistan, 20 corrupt practices were classified under three categories according to the nature of the reason for their occurrence, i.e.: (1) Lack of Transparency and Fairness, (2) Manipulation to Procurement Rules and Contractual Obligations, (3) Lack of Professional Integrity/Ethical behaviour. After categorization, the mean values for each of the categories were calculated. The categories were ranked based on the score of these mean values for traditional and PPP route of procurement.

The category with highest mean score value was given first rank; the category with the next highest mean value was given second rank and so on. The ranks of categories along with their mean values and corrupt practices for traditional and PPP procurement are shown in Table 6.6.

The categorization of corrupt practices would help determine the type of strategy to be adopted by procurement regulators/administrators/monitors to control corruption. For instance, while one category requires bringing transparency and fairness in the system, some other requires arrangements for accountability and ethical education of procurement personnel, and so on. As traditional route of infrastructure procurement is more vulnerable to corruption, as discussed under Section 6.3.5 in this Chapter, and the corrupt practices due to lack of transparency and fairness are on top of three categories of corrupt practices, they definitely need more attention. However, other two categories of corrupt practices cannot be overlooked too as their mean values do not show any significant differences. Similarly, PPP infrastructure also needs attention in all three categories of corrupt practices for being vulnerable to corruption.

Table 6-6: Categorisation of Corrupt Practices w.r.t. Nature of Occurrence

Mean Value		Rank		Categorisation of Corrupt Practices w.r.t. Nature of Occurrence
Trad.	PPP	Trad.	PPP	
3.52	3.20	1	1	Lack of Transparency and Fairness
				1- To hire favourite consulting services for project feasibility study and preparation of specifications/bid documents. 2- To approve overdesigned or inflated cost of project. 3- To set evaluation criteria to fit particular bidder. 4- To prepare tender documents in a way to favour private contractor/consortium. 5- To award contract to favourite bidder. 6- To misrepresent the facts and revenues of private contractors/consortium during bidding process. 7- To award long term unjustified incentives to concessionaire/private consortium. 8- To negotiate or renegotiate contract by one party or several to secure more favourable terms.

3.34	3.15	3	2	Lack of Professional Integrity/Ethical Behaviour
				1- To leak confidential inside information to help favourite bidder to prepare competitive bid. 2- To approve construction work and services below standard specifications. 3- To approve unjustified design and specification changes to create more variation orders. 4- To approve unjustified extensions in project execution/financial closure deadlines. 5- To approve claims for false invoices of non-supplied, inferior quality or inflated cost of construction material & equipment or unexecuted or exaggerated quantities of construction work. 6- To approve in advance/speedy payment claims for project works. 7- To change subcontractor/allowing sub-letting of construction work to petty contractors.
3.47	2.97	2	3	Manipulation to Procurement Rules and Contractual Obligations
				1- To accept unsolicited bids leading to sub-optimal project design and construction. 2- To under-estimate initial project cost for planning approval by government. 3- To identify and prioritize projects based on vested interests of parties involved. 4- To decide land use & price (as agriculture, residential or commercial) based on vested interests of parties involved. 5- To approve favourable environmental impact assessment/planning proposal. 6- To certify procurement process unnecessarily urgent to avoid requirement of competitive bidding procedure. 7- To set-up front company or as joint venture company or to create 'Fictitious Companies' to bid or allowing multiple bids under different names by same contractor to show competitive bidding process.

This requires a corruption control mechanism to be put into place to check the most frequently occurring corrupt practices on immediate basis and addressing all three categories of corrupt practices in long term.

6.4.1 Potential Corrupt Practices Related to Lack of Transparency and Fairness

The corrupt practices pertaining to lack of transparency and fairness issues occupy first rank in both, traditional and PPP routes of infrastructure procurement. Out of 20 corrupt practices, there are seven corrupt practices related to traditional procurement and eight related to PPP which fall under this category as shown in Table 6.6. Transparency is defined as a neutral and visible administering and management of the whole procurement process starting from the tender advertisement to the final contract award (Jourdain and Balgobin,

2003). Corruption increases in the opacity as opaque processes provide ample opportunities of manipulations to corrupt elements for personal gains. Transparency makes it difficult to abuse power and authority while increasing the chances of detection and being caught. It also increases public trust in the fairness of the process, thus increasing bidding competition by attracting more participants. Similarly, more participation also helps reduce corruption in the forms of nepotism, collusion, bribery, favouritism, etc. In addition, fairness requires impartial procurement procedures and equitable treatment to all prospective bidders.

Lack of transparency and fairness is the most prominent area (rank one) requiring attention of procurement regulators and management, as suggested by this study. It is important that procurement rules, regulations, plans and decisions are publicly available, or at least accessible by the representatives of the public in order to achieve process transparency. This transparency enables monitoring of procurement decisions and holds the decision makers accountable. Also, the people should be treated alike without considerable differences between them and no public funds should be spent on favouring individuals or specific groups. This feature of fairness is to be considered by decision makers while applying rules. Therefore, it is essential to create process transparency and fairness from the beginning of the procurement process in order to curb corruption in public infrastructure procurement.

6.4.2 Potential Corrupt Practices Related to Lack of Professional Integrity/Ethical Behaviour

Out of 20 corrupt practices, there are seven corrupt practices related to traditional procurement and six related to PPP which fall under this category as shown in Table 6.6. The corrupt practices pertaining to this category occupy third rank in case of traditional and second in case of PPP route of infrastructure procurement as shown in Table 6.6. Such corrupt practices are committed when procurement personnel do not follow institutional values and principles. Procurement personnel must be committed to uphold the required standards of professional integrity. It is evident from survey results that there are a number of corrupt practices related to an ethical conduct practiced by

procurement personnel thus damaging the reputation of procurement institutions. Therefore, to avoid corruption of this category, it is important to employ skilful technical expertise in impartial and non-discriminatory way throughout the procurement process.

6.4.3 Potential Corrupt Practices Related to Manipulation to Procurement Rules and Contractual Obligations

A total of six corrupt practices during traditional and PPP routes of procurement are related to manipulation to procurement rules and contractual obligation as shown in Table 6.6. The corrupt practices pertaining to this category occupy second rank in case of traditional and third in case of PPP route of infrastructure procurement as shown in Table 6.6. These are the corrupt practices arising due to non-compliance to procurement rules, regulations, procedures and contractual liabilities or obligations. Once a contract is signed, the involved parties must comply with the stipulated conditions of the contract. In order to avoid corruption of this category, procedures for internal and external accountability of procurement personnel need to be introduced. The possibility that decisions can be challenged and overturned by the higher authorities makes corruption difficult. In addition, sanctioning the corrupt behaviour provides incentive to comply with the procedures in order to avoid penalties. A pre-requisite to accountability is to maintain records showing explanations and justifications of all decisions, changes and actions for sound verification purposes.

6.4.4 Significance of the Study

The above discussion illustrates that both, traditional and PPP routes of infrastructure procurement are vulnerable to corruption. However, the likelihood of corruption is higher in the case of traditional infrastructure procurement. The significance of the knowledge of the top 20 most frequently occurring corrupt practices to practitioners is to determine potential causes of corruption and pitfalls. This may help procurement regulators / monitors / administrators to take corrective measures before any of such events occurs.

The top 20 corrupt practices are further categorized according to their nature of occurrence into: (1) Lack of transparency and fairness; (2) Lack of professional integrity/ethical behaviour; (3) Manipulation of procurement rules and contractual obligations. The categorization of corrupt practices would help determine the type of strategy that should be adopted by procurement regulators/administrators/monitors in order to control corruption. For instance, while one category requires bringing transparency and fairness in the system, others requires arrangements for accountability and ethical education of procurement personnel, and so on.

As the traditional route of infrastructure procurement is more vulnerable to corruption and corrupt practices due to a lack of transparency and fairness are in the top of three categories of corrupt practices, they warrant more attention. However, the other two categories of corrupt practices should not be overlooked, as their mean values do not show any significant differences. Similarly, PPP infrastructure also requires attention in all three categories of corrupt practices due to their vulnerability to corruption. This requires a corruption control mechanism to be put into place to check the most frequently occurring corruption practices on an immediate basis and addressing all three categories of corrupt practices in the long term.

The knowledge of corrupt practices, their comparison for traditional and PPP routes of procurement and categorization according to their nature of occurrence will help professionals to review the problematic ‘grey’ areas in procurement process. The results presented here suggest that the categorization of corrupt practices needs to be further examined in other areas of the world to comprehend and formulate strategies to curb corruption in public procurement of infrastructure under different procedural environment.

6.5 Measuring Institutional Trust in the Context of Infrastructure Procurement (IP) Market

The main survey is composed of two main questions under section-II. One of these questions (ranking of most frequent potential corrupt practices in traditional and PPP infrastructure procurement in Pakistan), has been discussed above; the second question is about measuring the respondents’ perception of

institutional trust in the context of infrastructure procurement in Pakistan. Drawing upon Pavlou, (2002) typology, each item under the domain of principal constructs was developed based on the conceptual definition. The respondents' were asked to rate each item under seven principal constructs on a Likert scale of 1 to 5 where; 1= Strongly Disagree and 5= Strongly Agree. Mean values were used to find the overall score of each principal construct. Five principal constructs, discussed in detail under Section 4.4 of Chapter Four, were used to measure the perception of institutional trust-building mechanisms in the context of infrastructure procurement market in Pakistan. The analysis and discussion of survey results is provided in Sections 6.7.2 to Section 6.7.8.

6.5.1 Agreement of the Survey Respondents

To compare if there is any difference in perception between different groups of respondents with respect to their type (client, consultant, contractor and researcher), with respect to perceived institutional trust in infrastructure procurement, the following hypotheses were tested for all constructs used to measure perceived institutional trust using One-Way ANOVA test:

Null Hypothesis-I: *There is no difference in respondents' perceptions according to their type regarding perceived institutional trust in infrastructure procurement in Pakistan.*

Alternate Hypothesis: *There is a difference in respondents' perceptions according to. their type regarding perceived institutional trust in infrastructure procurement in Pakistan.*

According to ANOVA, no significant differences were found ($p > 0.05$) for all items used to measure all five constructs of institutional trust building in infrastructure procurement in Pakistan, as shown in Tables 6.10, 6.11, 6.12, 6.13, and 6.14 by "F" and "Sig" values. Therefore, the null hypothesis is true for all items used to measure perceived institutional trust. This indicates that the sample was reasonably representative of the population in terms of the demographic variables tested.

6.5.2 Perceived Monitoring

Five items, three of which adapted from Pavlou, (2002) and two new items measure this construct. Four items reflect the extent to which the regulators/administrators of infrastructure procurement market monitor transactions, help resolve conflicts, and enforce proper conduct. One item measures the degree of compliance with project specifications. Table 6.7 shows the percentile score for all five items used to measure perceived monitoring in infrastructure procurement market in Pakistan. It also shows the mean values and rank of each item used to measure perceived monitoring. The difference between opinions of respondent groups (client, consultant, contractor, and researcher) was measured using “*F*” and “*Sig*” values obtained through One-Way ANOVA test and are shown in Table 6.7. Looking at the “*Sig*” values for all five items, it can be observed that there is no overall difference in opinion between different groups of the respondents about the perceived monitoring level in infrastructure procurement in Pakistan.

Item 4: (in Table 6.7) “There is an effective third-party mechanism in IP market to assure that completed projects are in accordance with the tender specifications” is ranked *highest* in the list of the items used to measure perceived monitoring in infrastructure procurement in Pakistan. This indicates that this structural mechanism is largely available during infrastructure procurement in Pakistan as “40%” respondents agreed and “14%” strongly agreed as compare to “8%” strongly disagreed and “19%” disagreed with this statement. This may be because most of the infrastructure projects are supervised by privately hired consultants who try to perform their job without any wrongdoings in order to save their reputation with a view to getting future projects.

In contrast, item 2: “There is an effective third-party authority in IP market to monitor public procurement activities and undertakes reviews regularly” is ranked *lowest* in the list of items used to measure this construct. This indicates that this structural mechanism is largely inexistent during infrastructure procurement in Pakistan as “16%” respondents strongly disagreed and “37%” disagree as compare to “19%” who agreed and “4%” strongly agreed with this

statement. This may be because the PPRA is considered a regulatory body without powers. The PPRA has no power to raise any objections and cannot stop any procurement process on accusations of wrongdoings.

Also, the Auditor General of Pakistan does not perform regular reviews of procurement agencies and even where audits are performed, the audit reports are substantially delayed with no follow-ups. In the absence of the required amount of record, it is also not possible to conduct project performance or economic audits.

As the PPRA does not maintain any reliable eligible contractor's list, item 1:(Table 6.7) "There is an effective third-party authority in IP market to monitor all contractors and help resolve conflicts" is ranked 4th in the list of structural mechanisms used to measure perceived monitoring level. The Public Procurement Rules (2004) provide grievance redressal mechanisms: "9%" of respondents strongly agreed about the availability of this structural mechanism. On the other hand, "13%" respondents strongly disagreed with this statement may be because despite the availability of this structural mechanism, they do not perceive this is to be an effective mechanism.

Table 6-7: Perceived Monitoring

No.	Perceived Monitoring	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Rank	One-Way ANOVA	
		%	%	%	%	%			F	Sig.
1	There is an effective third-party authority in IP market to monitor all contractors and help resolve conflicts.	13	33	18	27	9	2.86	4	0.645	0.587
2	There is an effective third-party authority in IP market to monitor public procurement activities and undertakes reviews regularly.	16	37	23	19	4	2.58	5	1.038	0.377
3	There is an effective third-party authority in IP market to undertake disciplinary actions on reports of misconduct by public procurement officials.	7	29	34	29	3	2.91	3	1.286	0.281
4	There is an effective third-party mechanism in IP market to assure that completed projects are in accordance with the tender specifications.	8	19	18	40	14	3.33	1	1.353	0.259
5	There is an effective third-party enforcing mechanism in IP market to assure that all transactions are conducted properly.	10	22	41	20	6	2.91	2	0.733	0.534

Item 3: (Table 6.7) “There is an effective third-party authority in IP market to undertake disciplinary actions on reports of misconduct by public procurement officials” is ranked on 3rd position. It is interesting to note that “29%” respondents disagreed and same percentage of respondents agreed with the availability of this structural mechanism during infrastructure procurement in Pakistan. On the other hand, majority of the respondents (34%) are neutral about this statement. This may be because the committees which investigate an allegation of officials misconduct are usually composed of members from within the relevant procurement departments leading to a perception bias in favour of accused officials. Judicial reviews are available outside the procurement organisations but are not perceived as an effective mechanism in this regard.

Although item 5: (Table 6.7), “There is an effective third-party enforcing mechanism in IP market to assure that all transactions are conducted properly” is ranked 2nd, the majority of respondents (41%) are neutral about the availability of this mechanism. This may again be because of the perception regarding the largely in-effective role of the Auditor General office.

6.5.3 Perceived Accreditation

Five items, three of which adapted from Mishra et al., (1998) and Pavlou, (2002) and two new items measure this construct. Table 6.8 shows the percentile score for all five items used to measure perceived accreditation during infrastructure procurement in Pakistan. It also shows the mean values and rank of each item used to measure perceived accreditation. The difference between opinions of respondent groups (client, consultant, contractor, and researcher) was measured using “*F*” and “*Sig*” values obtained using One-Way ANOVA test and shown in Table 6.8. Looking at the “*Sig*” values for all five items, it can be observed that there is no overall difference in opinion between the different groups of respondents about the perceived accreditation level in infrastructure procurement in Pakistan.

Item 2:(Table 6.8), “Publishing the vacant positions and recruitment rules is an important part of this IP market's recruitment process by public procurement organisations” is ranked highest in the list of items used to measure perceived accreditation. It is interesting to note that the majority of the respondents (47%) are neutral about this statement. This result may be due to changing media (electronic vs. paper) and routes for advertising with electronic media being more accessible to reach majority of the target population. Item 1:(Table 6.8), “I believe that this IP market undertakes into account the ethical considerations in recruitment and performance appraisal processes of public procurement officials” is ranked on 2nd position and is lower than item 2. This shows that even if the market takes into consideration the publishing of vacant positions and recruitment rules, it does not takes ethical considerations into account in terms of the appointment or appraisal process. This is considered especially true in case of appointments for those occupying higher ranks, particularly for the role concerning the heads of procurement departments, whose appointments are mostly politically backed based on nepotism basis. It is generally perceived that ruling political party finds this a convenient way to govern a department.

Items 3, 4 and 5, which are related to the screening and assessment of new contractors' competence, are ranked on 4th, 3rd, and 5th position respectively. It is interesting to note that almost similar percentages of the respondents have answered the Likert scale values from “strongly disagree” to “strongly agree”. This may be because no centrally operated body maintains and updates an eligible contractors list. The Pakistan Engineering Council (PEC), which is a licensing body, has no powers to debar a contractor and does not maintain histories of contractors' past performance. Instead, it is very easy to obtain fake project completion certificates from relevant government departments. On the other hand, Public Procurement Regulatory Authority (PPRA) has powers to debar a contractor, but, it is easy for contractors to obtain another license from the PEC under different names as both departments work separately and have no norms of sharing data with each other. All such reasons might have brought these structural mechanisms on lower ranks in the list of items used to measure perceived accreditation during infrastructure procurement in Pakistan.

Table 6-8: Perceived Accreditation

No.	Perceived Accreditation	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Rank	One-Way ANOVA	
		%	%	%	%	%			F	Sig.
1	I believe that this IP market undertakes into account the ethical considerations in recruitment and performance appraisal processes of public procurement officials.	6	22	36	25	11	3.13	2	0.751	0.523
2	Publishing the vacant positions and recruitment rules is an important part of this IP market's recruitment process by public procurement organisations.	5	20	47	24	5	3.13	1	0.092	0.964
3	Assessing the competencies of new contractors entering into the local market is an important part of this IP market's selection process.	10	23	24	33	10	3.09	4	0.504	0.68
4	I believe that this IP market undertakes a thorough screening process before private contractors are allowed to transact in its marketplace.	8	24	24	36	8	3.12	3	0.693	0.557
5	I believe that this IP market makes a substantial effort to assess the private contractors' true competencies.	4	25	37	33	2	3.04	5	1.073	0.362

6.5.4 Perceived legal bonds

Two items, adapted from Cannon and Jr., (1999) and Pavlou, (2002), measure the perceptions of the degree of contractual agreements that detail a contractor's obligations to client/procurement organisations. Table 6.9 shows the percentile score for these two items used to measure perceived legal bonds during infrastructure procurement in Pakistan. It also shows the mean values and rank of each item. The difference between opinions of respondent groups (client, consultant, contractor, and researcher) was measured using "*F*" and "*Sig*" values obtained through One-Way ANOVA test and shown in Table 6.9. Looking at the "*Sig*" values for these two items, it can be observed that there is no overall difference in opinion between different groups of the respondents about perceived legal bonds during infrastructure procurement in Pakistan.

Table 6-9: Perceived Legal Bonds

No.	Perceived Legal Bonds	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Rank	One-Way ANOVA	
		%	%	%	%	%			F	Sig.
1	This IP market imposes formal agreements that detail private contractors' obligations.	11	19	25	37	8	3.13	2	0.488	0.691
2	Participating in this IP market implies that private contractors have formal contractual agreements with clients/procurement organisations.	3	22	27	39	11	3.34	1	0.631	0.596

6.5.5 Perceived Feedback

Three items, adapted from Pavlou, (2002), measure this construct. One item measures the extent of contractors' performance histories for past projects being available by the local market; another item measures the extent of the market's feedback mechanism to provide information about the contractors' misconducts; and the last item measures the extent of the market's feedback mechanism in terms of clients/procurement organisations publicizing their transaction experiences with contractors.

Table 6.10 shows the percentile score for these three items used to measure perceived feedback mechanism during infrastructure procurement in Pakistan. It also shows the mean value and rank of each item. The difference between opinions of respondent groups (client, consultant, contractor, and researcher) was measured using "*F*" and "*Sig*" values obtained through One-Way ANOVA test and shown in Table 6.10. Looking at the "*Sig*" values for all three items, it can be observed that there is no overall difference in opinion between different groups of the respondents about perceived feedback mechanism during infrastructure procurement in Pakistan.

It can be noted by observing Table 6.10 that all three items have mean score values very close to each other and compare to any other items of other constructs used to measure level of institutional trust. This may be because the majority of the respondents either "disagreed" or "strongly disagreed" with all given statements as compared to those who "agreed" or "strongly agreed" with them. This may be because there is no centrally operated body which maintains the performance histories of most of the contractors, or allowing procurement organisations to publicise their experiences with other contractors, or provides a mechanism to inform procurement organisations about the contractors' misconducts. On the other hand, there is a percentage of respondents' who either "agreed" or "strongly agreed" with all these statements. This may be because some procurement organisations do maintain department specific eligible contractors' list on the basis of past performance.

Table 6-10: Perceived Feedback

No.	Perceived Feedback	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Rank	One-Way ANOVA	
		%	%	%	%	%			F	Sig.
1	A considerable amount of information about the performance history of most contractors is available from this IP market.	8	29	32	26	5	2.91	1	1.353	0.259
2	If any contractor misconducts on a project, a reliable feedback mechanism is provided by this IP market to inform client/procurement organisations.	11	37	20	22	10	2.80	2	1.084	0.358
3	There is an effective mechanism in this IP market to allow client/procurement organisations to publicize their contracting experience with other contractors.	12	33	25	24	6	2.78	3	1.652	0.18

Also, the parties involved in infrastructure procurement processes, including procurement organisations, private contractors, and consultants do share their experiences through “words of mouth” allowing them to publicise their experiences and informing each other of certain contractor’s misconduct somehow.

6.5.6 Perceived Cooperative Norms

Ten items, five of which adapted from Cannon and Jr., (1999); Heide and John, (1990); Macneil, (1980); Pavlou, (2002) and five new items measure this construct. Two items deal with perceived flexibility during transactions, two item captures the market’s involvement in promoting solidarity and providing grievance redressal mechanisms, three items measure the degree of information provision and exchange during transactions, two items capture conflicts-of-interest issues and one item measures the degree of safeguard to whistle-blowers.

Table 6.11 shows the percentile score for all ten items used to measure perceived cooperative norms in place during infrastructure procurement process in Pakistan. It also shows the mean value and rank of each item. The difference between opinions of respondent’s groups (client, consultant, contractor, and researcher) was measured using “*F*” and “*Sig*” values obtained through One-Way ANOVA test and shown in Table 6.11. Looking at the “*Sig*” values for all ten items, it can be observed that there is no overall difference in opinion between the different groups of respondents about perceived cooperative norms in place during infrastructure procurement in Pakistan. It is interesting to note that mean values for all ten items are above three and are close to each other. This implies that the majority of respondents agreed with all these statements. However, a comparison of mean ranks show that structural mechanisms for assuring ways of requesting the justification of procurement decisions and provisions for whistle-blower protection are ranked lowest, i.e. at 10th and 9th positions respectively. This may be because of the limited use of the Freedom of Information Act in the country and relatively no legal provision guiding whistle-blower protection.

Table 6-11: Perceived Cooperative Norms

No.	Perceived Cooperative Norms	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Rank	One-Way ANOVA	
		%	%	%	%	%			F	Sig.
1	This IP market promotes cooperative norms for contractors to resolve any transaction disputes.	1	17	30	43	9	3.41	1	0.696	0.556
2	This IP market provides an effective mechanisms for redress against decisions of public procurement organisations.	3	23	30	34	10	3.23	5	0.132	0.941
3	Most contractors are willing to make cooperative adjustments to transact successfully.	2	23	29	37	9	3.28	2	0.852	0.467
4	Procurement organisations/clients and contractors in this IP market exchange a considerable amount of information before transacting.	3	22	30	37	8	3.24	4	0.171	0.916
5	This IP market provides ways for clients/procurement organisations to receive relevant information from contractors before transacting.	7	22	22	38	12	3.25	3	0.434	0.729
6	This IP market provides ways for requesting justification of procurement decisions by procurement organisations.	5	20	47	24	5	3.05	10	0.092	0.964
7	Contractors rarely take advantage of clients/procurement organisations in this IP market.	9	19	24	38	10	3.22	6	1.179	0.32
8	This IP market provides safeguard to whistle-blowers reporting wrongdoings during procurement activities.	8	18	40	26	9	3.08	9	0.05	0.985
9	This IP market imposes formal standards detailing expected behaviour during potential conflicts-of-interest by public procurement officials.	2	26	31	36	5	3.17	8	1.422	0.239
10	This IP market requires declaration of conflicts of interest by public procurement officials.	7	25	20	36	11	3.19	7	0.856	0.465

On the other hand, both items capturing the transaction process are on top of this list of items used to measure perceived cooperative norms during the infrastructure procurement process in Pakistan. This may be because the country's legal system is not perceived to be effective and therefore, procurement participants prefer to resolve their conflicts on their own and opt for out of court settlements.

Items 9 and 10: (Table 6.11) capturing conflicts of interest issue are also ranked lower i.e. 8th and 7th positions respectively. This may be because few individual projects may have required a declaration of a conflict of interest by procurement officials as part of integrity pacts, but overall there are no legal provisions covering these issues or requiring the declaration of conflicts of interest situations by procurement officials. Items 4 and 5: (Table 6.11) capturing exchange of information between procurement organisations and contractors are ranked on 3rd and 4th position, and are relatively on the higher side in the list of all ten items. This may be because of the information required by procurement organisations at the pre-qualification stage. In order to get included in a bidders' short list, all interested contractors are required to provide relevant information at the pre-qualification stage. Therefore, the respondents perceive that this structural mechanism is available in this infrastructure procurement market.

Item 2 is ranked 5th in Table 6.11. This item is ranked in the middle of all items and may be because the majority of the respondents perceive that this mechanism is available in this infrastructure procurement market. But those who do not agree with this statement or take a neutral position, perhaps they do not find this structural mechanism that effective. Item 7 is ranked on 6th position in Table 6.11 and shows that majority of the respondents (38%) agreed with this statement. But 19% respondents disagreed and 9% strongly disagreed with this statement indicating possibly that there are occasions where respondents perceive that contractors take advantage of procurement organisations.

6.5.7 Overall Perception of Institutional Trust in Context of Infrastructure Procurement

A mean score value for each individual construct was calculated using the mean values of items used to measure that construct. This mean score was used to find the level of trust for each individual construct during the infrastructure procurement process in Pakistan. A total mean score value was also calculated using the mean score values for individual constructs to find an overall perceived level of institutional trust in the infrastructure procurement process in Pakistan. A comparison of these mean values is shown in Table 6.12.

Table 6-12: Perceived Level of Institutional Trust

Perceived Level of Institutional Trust		
	Mean	Rank
Perceived Monitoring	2.92	4
Perceived Accreditation	3.1	3
Perceived Legal Bonds	3.24	1
Perceived Feedback	2.83	5
Perceived Cooperative Norms	3.21	2
Overall Mean Value	3.06	

The analysis indicates that the rating of perceived institutional trust was lowest for the perceived feedback mechanism (mean = 2.83), whereas, it is highest in case of perceived legal bonds (mean = 3.24). An overall mean score value for perceived level of institutional trust is above three (mean = 3.06) suggesting that majority of the respondents agreed with the availability of identified structural mechanisms during infrastructure procurement process in Pakistan. Hence, this evidence suggests that that majority of the respondents do have institutional trust in infrastructure procurement process in Pakistan. However, a mean score value (3.06) slightly above three (mean score value 3 = neutral) suggests that they do not have much confidence may be because of concerns about the effectiveness of these available structural mechanisms.

Low and declining public trust in state institutions is common and somewhat unsurprising in countries with rampant corruption. This quantification of trust would provide the basis for institutional trust building and maintaining mechanisms thus reducing this lack of trust in infrastructure procurement process due to perceived level of corruption in this sector.

6.5.8 Significance of the Study

It is of fundamental importance to procurement administrators, regulators and monitors to understand which structural assurances and mechanisms help build trust in an impersonal context. These structural mechanisms provide signals and incentives for procurement organisations and private contractors to behave cooperatively. In addition, these structural assurances can help in build inter-organisational trust. Based on theoretical work of McKnight et al., (1998), McKnight and Chervany,(2001), and Zucker, (1986) on initial trust formation, this study proposes several trust building institutional structures based on their relative effectiveness in the context of the infrastructure procurement market with an empirical evidence. These institutional-based sub-constructs constitute institutional trust. This study suggests that institutional-based trust is likely to be the most important determinant of trust, until experience and familiarity grows between procurement organisations and private contractors.

The findings also highlight the role of the procurement regulatory authority in building trust by providing institutional structures, assurances and values. Moreover, findings suggest that procurement organisations and private contractors need to take steps to increase the effectiveness of trust-building mechanisms in order to improve inter-organisational trust and to enable collaborative relationships. Public procurement agencies and private contracting firms could utilize the findings of this study to design and improve their trust-building structural mechanisms to promote a trustworthy trading environment. The outcome of this institutional trust can be viewed in the form of contractors' engagements in such transactions that would otherwise be viewed at extreme risk due to perceived level of corruption in this sector.

6.6 Summary

The survey revealed the most potential corrupt practices during traditional and PPP infrastructure procurement as well as institutional trust-building structural mechanisms to enhance trustworthiness of infrastructure procurement market in Pakistan. The research findings show that there are more similarities than differences between relative frequencies of potential corrupt practices likely to occur during traditional and PPP infrastructure procurement in Pakistan where the market for PPP infrastructure procurement is not yet mature. The research findings regarding institutional trust-building mechanisms indicate that the available structural assurances for being less effective decline respondents' perception of trust on infrastructure procurement market in Pakistan. This response suggests a lack of confidence in public institutions in a country like Pakistan where corruption is perceived to be rampant and a likely cause of decline in trust in response to less effective structural mechanisms

7 Qualitative Data Analysis and Discussion

7.1 Introduction

Corruption is likely to occur in the infrastructure procurement process due to the large amount of transactions involved and difficulties in monitoring project expenditure throughout the procurement process. The aim of this chapter is to identify causes that facilitate corruption in infrastructure procurement in Pakistan in order to develop strategies to minimize that risk. Data collection through semi-structured interviews (telephonic/Skype and face-to-face) with procurement and supervisory professionals within the Pakistani infrastructure sector. Some of these professionals have direct experience and responsibilities to investigate procurement corruption. Findings suggest that corruption occurs in different forms at different stages of the procurement process due to: inadequate and non-implemented procurement rules, ineffective complaints and verification mechanisms, regulatory fragmentation, lack of credible anti-corruption institutions and project supervision mechanism, limited public access to project information, lack of institutional capacity and honest leadership.

7.2 Interview Findings and Discussion

Despite the fact that all interviews covered different sectors and projects of various capital values, there was strong consistency and agreement between different views of the participants. Interview questions were grouped under various categories depending upon the nature of the question. The advantage of doing so is that common points are reinforced throughout, whereas contrasting ideas can be presented at the same place. All the interviews were digitally recorded, transcribed and analysed using the NCH[®] Express Scribe Transcription Software. All common phrases and technical terms were searched using the software and divided into different themes as discussed below. Transcripts were also sent to the interviewees to confirm the content with follow-up clarifications made in some cases.

Summary of Interview Findings				ID of Interviewee															
				Client				Consultant				Contractor				Researcher			Total
				IP1	IP2	IP3	IP4	IP5	IP6	IP7	IP8	IP9	IP10	IP11	IP12	IP13	IP14	IP15	
What are the forms of corruption most associated with infrastructure procurement in Pakistan?																			
1	Conflict of Interest	✓	✓			✓		✓	✓	✓			✓	✓		✓	9		
What are the causes that facilitate corruption in infrastructure procurement process in Pakistan, and how?																			
Weakness in Implementation System		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15		
1	Deviations from Mandatory Requirements of Project Planning and Approval Laws i) Overlooking In-depth Cost-Benefit Analysis Requirements ii) Overlooking Adequate Feasibility Study Requirements iii) Overlooking Requirements of Sufficient Project Funds Availability		✓	✓	✓			✓		✓	✓		✓		✓	✓	9		
2	Deviations from Competitive/Open Bidding Procedures	✓		✓		✓	✓	✓		✓		✓			✓	✓	9		
3	Deviations from Rules on Tender Advertisement & Bidding Period			✓	✓	✓				✓	✓			✓	✓		7		
4	Bid Opening Process	✓	✓			✓	✓		✓		✓		✓	✓	✓		9		
5	Delays in Project Payments	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	12		
6	Fragmented Regulatory Regime		✓		✓	✓		✓	✓	✓	✓		✓	✓	✓		10		
	(i) Limited Coverage of Public Procurement Rules					✓	✓		✓		✓	✓		✓	✓		7		
	(ii) Multiplicity of Bidding Documents	✓	✓		✓	✓		✓		✓			✓	✓		✓	9		
	(iii) Jurisdiction Overlap		✓		✓		✓		✓		✓		✓		✓	✓	8		
Ineffective and Inadequate Procurement Rules		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15		
1	Pre-Qualification, Qualification and Disqualification of Contractors		✓		✓		✓	✓	✓		✓		✓	✓		✓	9		
2	Formation of Bid Evaluation Committee	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		13		
3	Cartelisation		✓			✓			✓		✓		✓	✓	✓	✓	8		
4	Limited use of ‘Public Access to Information’ and ‘Conflict of Interest’ Laws	✓	✓	✓		✓		✓		✓		✓				✓	8		

5	Community Participation in Public Procurement Process			✓	✓		✓		✓		✓	✓		✓		✓	8
Lack of Institutional Capacity and Honest Leadership		✓		✓		✓	✓		✓	✓		✓		✓	✓		9
<i>Is it common to report procurement corruption and irregularities in Pakistan? If not, why?</i>																	
Yes																	
No		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15
Ineffective Complaint & Verification Mechanisms		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15
1	Fear of future disadvantage on filing a complaint		✓		✓	✓		✓	✓		✓		✓		✓	✓	9
2	Short time period for filling a request for review	✓				✓	✓			✓		✓		✓	✓		7
3	No follow-up of audit reports	✓	✓	✓			✓	✓		✓		✓	✓		✓		9
4	No secure storage to save project documents from potential damages	✓	✓		✓	✓		✓		✓	✓	✓		✓		✓	10
Ineffective Mechanism to Sanction Corrupt Behaviours		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	14
1	Weak enforcement of available sanctions and penalties		✓	✓	✓			✓	✓		✓		✓	✓	✓	✓	10
2	Lack of Credible Anti-Corruption Institutions	✓		✓		✓		✓		✓	✓	✓		✓		✓	9
No Protection for those who Report Corruption		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15
Lack of Integrity & Ethical Education of Procurement Personnel				✓	✓		✓		✓		✓	✓			✓	✓	8

Table 7-1: Summary of Interview Findings

The complete detail of the participants and the projects is kept confidential due to sensitivity of the research topic, and hence anonymity is used while describing different situations in a way that does not affect the intended knowledge transfer. The summary of interview findings is given in Table 7.1.

7.3 What are the forms of corruption most associated with infrastructure procurement in Pakistan?

There was a general consensus view among the participants about “conflict of interest” issues which manifested themselves in different ways during infrastructure procurement. Participants felt that the need for a project is often exploited by completing low priority or unwanted projects at the expense of high priority ones for political gain. Project identification and prioritization may result in preferences for certain cities or certain areas of a city which are political constituencies of parliamentarians. This phenomenon has also been identified by other researchers as present during the procurement of infrastructure projects elsewhere (Castalia, 2009; Cavill and Sohail, 2007b; Kenny, 2007). This results in unnecessary project selection instead of identifying and prioritising on the basis of national or regional needs or availability of finances (Cavill and Sohail, 2007b).

Politicians have a lot of say in the project selection process due to their power and control over bureaucrats. Participants shared many stories when a school was established or the low cost housing scheme was initiated in an area which a political constituency of some parliamentarian and already had adequate provision, while a neighbouring area might not have had at all any educational or proper housing facilities. Other examples included: a school being built in a remote area which cannot be approached using adequate road links or transport facilities and is in essence built only to appease voters; and a road alignment being diverted to pass by the political constituency of some parliamentarian without genuine justification. Participants also shared many stories when project contracts were awarded to a particular contractor who might be friend or relative to a politician. According to the National Accountability Report, (2002) by Government of Pakistan (GoP) development projects have been identified and managed unprofessionally because of vested political interests in their

identification. The contracts of projects are awarded to the friends or relatives of top officials or parliamentarians. New projects are started to appease voters or to benefit political constituencies or to acquire maximum economic advantages that accrue in early stages of the project construction. Consequently, large number of unfinished projects continue to exist (GoP/NAB, 2002).

Project managers, consultants and contractors usually do not have any motivation to complete their projects on-time or within budget. For project managers, prolonged projects provide them with more opportunities to gain personal benefits, e.g. extra pay, vehicles, other job allowances and above all, job security. Similarly, the consultants would be interested to delay the project in order to charge extra billing hours and professional fees. The Contractor(s) is/are also interested to delay the project in order to file more claims and receive extra payments. As a result of this conflict of interest, project managers, consultants and contractors and sponsor agencies collude at this stage to avail all these extra incentives (GoP/PC, 2011a).

Such conflicts of interests are more prevalent during infrastructure procurement in Pakistan when the same consultants who help public procurement agencies in the preparation of PC-I for project approval, PC-II for feasibility study of the project and tender documents, are also hired during project execution. Researchers have observed that public officials regularly approve changes in initial project work or supplementary works which are not actually required, in exchange for bribes (della Porta and Vannucci, 2001; Søreide, 2002). According to the participants, road projects are selected more frequently as it is easier to hide corruption in such projects. This perception is also evident from Pakistan Planning Commission's report (2011a), which confirms the largest budget allocations in the road sector. This situation comes for no surprise as according to Tanzi and Davoodi, (1998); Mauro, (1995); and Kenny, (2006) large and new construction projects are preferred to health and education projects and spending on operation and maintenance is also ignored despite being a key factor in preserving the economic value of infrastructure.

7.4 What are the causes that facilitate corruption in the infrastructure procurement process in Pakistan, and how?

The following presents the analysis and discussion of the interview findings regarding procedural and institutional factors that cause corruption in infrastructure procurement process in Pakistan. These causes are grouped into three categories depending on their nature and origin, as follows:

- i) Weakness in Implementation System
- ii) Ineffective and Inadequate Procurement Rules
- iii) Lack of Institutional Capacity and Honest Leadership

Weakness in implementation implies a weak regulatory system to monitor and regulate contracting and consulting services, thus providing opportunities of corruption. Ineffective and inadequate procurement rules are another fundamental issue that provides ample opportunities for corruption. A lack of institutional capacity results in the adverse selection of contracting and consulting services and inefficient monitoring of procurement processes thus providing more opportunities for corruption. In the following section, a detailed discussion and analysis of interview findings on causes of corruption in the infrastructure procurement process in Pakistan is presented.

7.4.1 Weakness in Implementation System

Deficiencies and weaknesses in governing systems may trigger a risk of corruption where individuals overlook rules of law to pursue their personal interests (Shihata, 1997). A fragmented regulatory regime results in non-uniformity of rules and standards' duplication which can be used for corrupt ends. Procurement personnel may exploit loopholes in the system for corrupt ends (Aidt, 2011), as a weak governing system makes it difficult to apply and supervise the correct law on appropriate occasions. An Individual's decisions may vary depending on the expected advantages and disadvantages of being caught and prosecuted. When a monitoring system is inadequate and weak, people find it profitable to use bribes in order to avoid costly rules and penalties for harmful conduct (Melgar et al., 2009; Svensson, 2005). They can

also influence the law enforcing process through lobbying, bribes or political connections to buy favourable interpretations of the law (Melgar et al., 2009).

7.4.1.1 Deviations from Requirements of Project Planning and Approval Laws

Pakistan's procurement framework is based on the United Nations Commission on International Trade Law (UNCITRAL) model law which mainly focuses on the procedures of selecting the supplier. It does not provide laws on procurement planning and approval of the delivered goods and services which are, to an extent, covered by the country's budget and general contract laws. There was a general consensus among the interviewees that current laws on project planning and approval are inadequate, outdated and lenient to deviations from mandatory requirements of in-depth project cost and benefit analysis, feasibility study and sufficient funds availability. Where these laws are not fully enforced, they fail to respond the risk of corruption.

1. Overlooking In-depth Cost-Benefit Analysis Requirements

It is essential to accurately define the project scope and specifications during the project inception and planning stage to avoid the risk of corruption (Søreide, 2002). If not, lateral cost escalations above the originally estimated project cost are manipulated for corrupt ends. Participants mentioned that the requirement of in-depth cost-benefit analysis is mostly overlooked. Proper project cost-benefit analyses are not done and alternatives to deliver the same objectives are not fully examined. There is no mandatory PPP option analysis for doing the same project before going to the traditional route of procurement (GoP/PC, 2011a). This shows the public procurement institutions do not have the drive and thrust to look for PPP arrangements by default when they are trying to seek public funds for projects. Therefore, the choice of a procurement route depends entirely on the procurement officials who may abuse their authority and powers for corrupt ends. According to one of the participants,

“It seems procurement personnel do not anticipate more authority and involvement in PPP projects as compare to traditional projects, therefore, they are least interested in doing these projects” (IP6).

It is common to over-estimate project benefits and under-estimate project costs in order to get it approved initially and then subsequent allocations are made (GoP/PC, 2011a). Project costs are under estimated initially in the hope that lower cost projects have a higher chance of government approval (Tahir, 2005). According to participants perceptions, this trend seems to be a short cut by procurement organisations to get approval of low budget projects and then subsequent allocations are made.

2. Overlooking Adequate Feasibility Study Requirements

There was a general consensus among the interviewees that the mandatory requirement of a feasibility study by PPR (2004) is mostly overlooked before starting a new project. It is common to announce new infrastructure projects without adequate feasibility studies. This requirement is particularly overlooked when the project is announced to gain popularity for the ruling political party. Mostly the projects approved by the Member of Parliament's (MPA's) discretionary funds, are started without carrying out adequate feasibility studies. Inadequate feasibility studies also result in project funds shortage and provide opportunities to pilfer project funds for personal benefits and blaming them to be in shortage since allocated. It is important to carry out pre-feasibility or feasibility studies before starting a PPP project because without having a good feasibility or pre-feasibility study, it takes more time and effort to negotiating the mechanism of project delivery, thus providing more opportunities for corruption.

3. Overlooking Requirements of Sufficient Project Funds Availability

There was a general consensus among the interviewees that required project funds are not allocated in full in the country's annual budget plan upon the start of a new fiscal year, thus leading to more opportunities for corruption. The availability and continuity of project finance is necessary for it's on time and within budget completion. According to Søreide, (2002) decisions regarding the allocations of public spending are affected by corruption as they provide opportunities to obtain bribes. Corrupt decisions may result in high payments for inferior goods and services and spending on unnecessary and unproductive projects (Søreide, 2002).

Both, PPR (2004) and the country's Budget Rules require project planning at the start of the year and therefore these plans could be included in the country's annual budgets (GoP/PC, 2011b). However, the annual budget plans are prepared largely independently of all such plans (GoP, 2009a). Instead, the procurement plans are modified in order to be consistent with the country's annual budget plans. These spending proposals are purely tactical decisions based on last year spending on different projects and are not part of a broader strategy. In capital intensive projects, the tendency is to underestimate project costs and over-estimate benefits to get the needed funding and the project underway. In addition, funds allocation on a project is for one financial year and does not ensure continuity for subsequent years (Tahir, 2005). Even when funds are allocated through annual budget plans, they are not committed in full. Consequently, this results in insufficient availability of funds for on-going and new projects. This uncertainty of future funds availability provides more opportunities for corruption.

In Pakistan, this type of funding pattern is known as a "token fund" release which changes the whole competitive environment on a project. This type of funding pattern hampers competitive bidding process. Reputable companies are not interested in bidding for such projects, when they already know that funding arrangements are limited to yearly plans as it may affect their economic situation if their money stuck on a project. Companies that do bid are those which have the ability to receive project funding without any interruption due to their connections with government officials and their political elite. With limited fund availability, there are high chances of projects being abandoned, thus making such projects more vulnerable to corruption. Moreover, contractors being aware of future funds shortage on a project do not perform quality work or simply abandon the projects in the absence of rules to bound contractors till satisfactory project completion and hand over to clients.

In addition, there are no guidelines on deciding how much and on which project, money is to be spent (GoP/PC, 2011b). Therefore, the participants perceive that it is very easy to divert project funds from one sector to

another or from one project to another without prior budget allocations and government approvals. Projects included in Public Sector Development Programme (PSDP) this year might not be there next year resulting insufficient funds availability for on-going and new projects. The projects identified and prioritized on political basis are of much more value than those identified by development departments (GoP/PC, 2011b). A large percentage of total development budget is discretionary money to be used by Member of Parliament's (MPA's) as discretionary development funds. The Member of Parliaments' (MPA's) discretionary development funds can bring new project into system any time during a financial year putting pressure to the funds continuity for on-going projects. This type of project initiation is not based on any strategic alignment. All of this result in funds shortage for on-going and new projects and provide more opportunities of corruption.

7.4.1.2 Deviations from Competitive Bidding Procedures

According to PPR (2004), the default procurement method is a competitive process or open bidding but use of alternative methods is also allowed. There was a general consensus among the participants that public procurement officials abuse their authority in selecting procurement methods in the absence of comprehensive and strict procurement rules. Although PPR (2004) specify limits of project value for use of alternate methods, but these value limits are extendable on request of procurement organisations (GoP, 2009a). Moreover, PPR, (2004) does not explicitly define the conditions for 'emergency procurement' and 'extreme urgency' for justified use of negotiated procurement procedures and single-source or direct purchase methods (GoP, 2009a). Thus, procurement personnel use their authority to by-pass competitive processes for vested interests. It is common for government officials to split the purchase value in the small number of contracts to avoid the competitive bidding method. As there are no strict provisions regulating repeat orders, they are requested from the same contractor with an initial lower contract value which allows exemption from the competitive bidding process. One of the participants shared that:

“Once the same transaction advisory services were hired for almost a decade and there was no over-watch [sic] to investigate the matter when other more competitive firms were also available in the market” (IP5).

Public procurement officials abuse the provisions for emergency procurement and negotiated procedures to avoid competitive bidding. Two arguments are commonly used for use of less competitive procurement methods; first, competitive bidding which takes a long time, secondly, the immediate availability of service provider through other public owned subsidiaries or private companies. Participants perceived that procurement personnel take advantage of the period at the end of fiscal year when there is a rush to meet spending targets which can be easily blamed for creating an emergency to get exemption from competitive processes. To justify negotiated or direct procurement methods, corrupt procurement personnel also try to fail a tender, blaming the few bids or non-availability of minimum responsive bid as there are no clear provisions in PPR allowing for re-tendering or negotiations (ADB/OECD, 2006b). The justification for any deviations from open tendering is required in writing, but is not considered sufficient to avoid corruption as manipulations at this stage are not easy to detect, even if detected, it is almost impractical to go for the complete tendering process once again.

7.4.1.3 Deviations from Rules on Tender Advertisement & Bidding Period

There was a general consensus among the interviewees that PPR (2004) regarding the tender advertisement are not fully enforced. According to PPR (2004) tender opportunities are required to be advertised at least in two national newspapers, one in Urdu one in English at least, but tenders are published in low circulation newspapers to avoid competition. Bidding known to a large number of bidders not only reduces chances of corruption, but provides the most economical bid choice (Søreide, 2002).

Most of the participants also did not perceive adherence to PPR (2004) regarding bidding periods in letter and spirit. PPR (2004) empower procurement authorities to determine bidding period according to the complexity and requirements of the project. However, in the absence of regulations for mandatory consideration of project cost and size, the minimum time allowed to

prepare responsive bids is manipulated for corrupt ends. Corrupt public procurement officials give unrealistically short bidding periods deadlines to favour certain bidders. Limiting bidders' participation this way allows the participation of those firms only which are well prepared in advance (Boehm and Olaya, 2006; de Jong et al., 2009; Søreide, 2002). The respondent's shared instances of many occasions when procurement authorities determined bidding periods far less than the stipulated rules, with the most extreme example was a tendering process of only one day for an international tendering process.

7.4.1.4 Bid Opening Process

The opening of the bid is another crucial stage of the procurement process which can break the credibility of a competitive bidding process. Accepting a tender after the due date is not allowed by PPR (2004), but there was a general consensus among the participants that procurement officials use their position to accept a tender after the due date. According to their perception, procurement personnel sneak an extra letter containing the lowest bid offer in the room as soon as the bid price is known for others. This is because there is no scrutiny by an opening bidding process by a third party and the process lacks an effective mechanism to over-see these activities. PPR (2004) requires the presence of bidders while opening bid offers but does not include provisions about the presence of neutral public representatives as witnesses (ADB/OECD, 2006b). While some procurement entities do involve representatives from other public organizations to witness the process, others refuse to do so as this is not a mandatory requirement by PPR (2004). Even where witnesses are included, their presence remains on paper only, as they have no authority to raise any objections. Furthermore, including witnesses require specifying who qualifies as witness or defining incompatibilities.

7.4.1.5 Delays in Project Payments

There was a general consensus among the participants that there was a lack of effective mechanisms to regulate project payments which provides opportunities of corruption. Although the country's Financial Rules and Regulations require in-time processing of payment bills, the participants perceive that project payments are not made on-time to generate bribes.

Government officials usually blame tedious bureaucratic processes causing delays in payments, thus pushing contractors to offer them bribes to avoid unnecessary delays. Contract documents do not usually include clauses for contractor's compensation on a client non-performance during unforeseen events and delays causing price escalation. Even if these contract clauses are included, which specify penalties and additional costs of delayed payments, they are weak and applied with bias. Also, the clients do not have any external pressures for instance, by regulators for releasing payments on time. Therefore, governments in developing countries usually have a reputation of poor payment records with no clear cut milestones and payment timetables.

Moreover, the release of project payments is also not compatible with the expenditure life cycle of the project which requires major cash inflows in the middle of the project. Usually, funds with equal payments are released for first three quarters, and then relatively heavy transactions are made in the last two months of the fiscal year (GoP/PC, 2011b). This pattern of funds release which starts with constant amount of payments and then releasing heavy chunks of payments is counterproductive and is used for corrupt ends.

7.4.1.6 A Fragmented Regulatory Regime

In a fragmented regulatory regime, corruption becomes an obvious concern as procurement agencies may knowingly use and abuse the regulatory diversity and multiplicity of rules. Asymmetric information and costly institutional structures may also be used to extract bribes. The presence of diverse or multiple rules and regulations also result in less transparency and more legal uncertainties for both, the procurement agencies and the potential bidders. According to Shihata, (1997) not only the absence of rules facilitates corruption, but also the presence of cumbersome or excessive rules. In the absence of uniform rules, the steady and predictable procurement practices suffer and judicial reviews become difficult. Moreover, the level of penalties being enforced for violations, the likelihood of being caught and prosecuted, and the severity of punishment if convicted, may also provide opportunities for corruption (Melgar et al., 2009).

1. Limited Coverage of Public Procurement Rules

PPR (2004) only includes procedures for purchase of goods and works at federal level and do not exist for procurement of consulting services (GoP, 2009a). For procurement at lower levels (provincial and municipal level), the rules and regulations are significantly less developed. Also, project approval processes only cover conventional routes of procurement and are available for traditionally procured projects only (GoP/PC, 2011b). They do not include PPP project approval process (GoP/PC, 2011b). The procurement framework is also unclear regarding approval process for the projects which are totally financed by private sector, whether they require similar approvals (GoP/PC, 2011b).

There was a general consensus among the participants that procurement personnel may abuse limited coverage of PPR (2004) to obtain bribes. This limited coverage of public procurement rules causes regulatory fragmentation and standards duplication and harms the effectiveness of public procurement framework. Moreover, the Public Procurement Regulatory Authority (PPRA) and Pakistan Engineering Council (PEC) do not have necessary powers to take action against procurement organisations on violations of PPR (2004). In this scenario, the role of PPRA and PEC is no more than a toothless bulldog without teeth as they have no necessary powers being the regulators to take any substantial actions against their violators.

2. Multiplicity of Bidding Documents

There was a general consensus among participants regarding the decreased transparency of bidding process due to the use of multiple contract templates by public procurement organisations, thus providing opportunities of corruption. Individual procurement organisations are allowed to develop department specific procurement laws in the presence of PPR (2004) with potential conflict situations. Also, in conflict situations, the hierarchy of legislation is unclear leading to more opportunities of corruption. Procurement agencies may purposely use and abuse such regulatory diversity (OECD, 2007b). This non-uniformity also provide opportunities to

procurement organisations to develop more client oriented tender documents giving less protection to contractors. This is against FIDIC requirements which are the basis of Pakistan's contract laws. Furthermore, tender documents are prepared in a way to favour particular bidder. Quantities are exaggerated and extra items are included in collusion with private consultants and contractors to inflate the project cost for lateral benefits during the project construction phase. As there are no regulations to guide the tender distribution process, one of the participants mentioned that heads of procurement departments place commissions/premiums on providing tender documents to interested bidders. This is how they not only make money for themselves, but also discourage bidders' participation.

3. Jurisdiction Overlap

Since 2008, use of General Contract Conditions (GCC) and Standard Bidding Documents (SBDs) by PEC became compulsory for public procurement organisations. This generated a conflict between PEC and PPRA on the oversight of work. Although, the prime duty of PEC is to encourage professionalism in the public sector and does not include regulating procurement work, it still continues to do so in order to ensure professionalism and adherence to the standards without having necessary powers and authority.

There is also no clear demarcation for the PPP projects whether it needs to be procured at the federal or provincial level. Public procurement organisations, both at federal and provincial level, provide a forum for the procurement of PPP projects which was called "Forum Shopping" by one of the participants. This "Forum Shopping" means that private investors can use any forum (procurement entity) for procurement according to its suitability to requirements. This means for the procurement of the same project, a firm can go to any procurement agency at federal or provincial level, i.e. more than one windows or parallel tracks are available for implementation of the same project. There are no rules which could bind a firm to use only one platform for procurement of a project. This also confuses foreign investors and donor bodies in terms of whether to go for

procurement at federal or provincial level. Therefore, the multitude of public procurement organisations and monitoring bodies have a jurisdiction overlap during the infrastructure procurement process in Pakistan.

7.4.2 Ineffective and Inadequate Procurement Rules

Ineffective and inadequate infrastructure procurement rules and procedures do not represent efficient deterrence to corruption, instead they represent a multitude of corruption opportunities (OECD, 2007b). Such opportunities may arise due to discretionary powers with procurement personnel during the procurement process or may deliberately be created through the complexities of the process, nature and technicalities of works and services involved (OECD, 2007b). People pay bribes to government officials to protect themselves against costly rules (Melgar et al., 2009). Procurement agencies may give the privilege to certain bidder during the tendering process or can formulate bid evaluation criteria which could be fulfilled by certain bidder.

7.4.2.1 Bidders' Pre-Qualification, Qualification and Disqualification

Pre-qualification or short-listing is done to limit the number of competitors on the basis of different eligibility conditions. There are many good reasons for pre-qualification such as support for national suppliers, efficient handling of procurement process and to avoid fraudulent or incompetent suppliers. However, there was a general consensus among the participants that inclusion in the short-list of eligible contractors is vulnerable to bribe payments and kickbacks. Therefore, it is possible that contractors who are short listed are't actually eligible, and those who might have rejected it will be subject to fair competition and may win the contract. Also, the verification of contractors' financial position and previous work experience is not easy in Pakistan as contractors' performance histories are not centrally recorded and maintained. Short-listing is generally done on the basis of previous work experience criteria which is argued for its fairness in the absence of considerations to bidder's skills and competence (Hussain et al., 2007).

Moreover, "Lowest-Bid Win" is the sole criterion for selecting amongst the responsive bids under normal circumstances in Pakistan. There was a general

consensus among the participants that contractors collude with procurement personnel to submit an artificially low bid in order to win the contract award. Later on during construction phase, changes in project scope and specifications are used to create more variation orders, thereby raising contractor's profits and lowering their costs. Alternatively, contractors compensate by compromising work quality. Therefore, researchers argue that the criteria has inherent flaws of high competition and low performance (Farooqui and Ahmed, 2008). It pushes contractors to submit a bid low enough to win the contract by cutting price from all corners (Nicholas and Steyn, 2008) and later on by compromising on project quality and safety to gain high profits (Durrani et al., 2007; Shah et al., 2010). The substandard project quality results in low service life and high life cycle cost and eventually marginalizing the image of procuring agency (Shah et al., 2010). Also, the criteria do not require the demonstration of whether the lowest bid is 'workable' or 'balanced' and if the contractor is actually capable in terms of resources and experience to carry out the required job (Durrani et al., 2007).

Also, the large and complex infrastructure projects are more vulnerable to corruption as contractors would ensure the award by giving bribes, fearing he might lose the bid. The reason for this is high competition for fewer numbers of projects in the market where an alternative is available with little differences. Contractors approach government officials and gratify them to reach an agreement in advance before the tender is even published or advertised. In return, procurement officials set such criteria that only contractors with prior knowledge wins. Also, the participants perceive that contracts are usually awarded on the basis of nepotism and ethnicity, etc. Big projects are usually awarded to those contractors who are relatives of ruling political party or top official or belonging to the same ethnic origin. One of the participants said,

"They say what if I help my brother (friend/relative), what's wrong in it? (IP14)"

Contracts are also awarded through "rollers game" when the bidders collude and share the contract among themselves like in a cartel. In this situation, a contractor wins the contract because it is his 'turn', not because he offered the best value for money (della Porta and Vannucci, 2001; Hartley, 2009).

Moreover, participants perceived that the conditions for disqualification are not proportionate to the seriousness of the violation or the error. It is common to disqualify good bids on the basis of missing or incomplete addendum or for unrealistic and outdated Schedules of Rates, giving wrong cost estimates. Also, a large number of short addenda following the tender notices, if missed with the tender submission, result in bidder's disqualification. This is because Public Procurement Laws only include provisions for fraudulent conduct and false information and substantially lack comprehensive provisions on using bidder's disqualification instrument (GoP, 2009a). Bribes are also paid to exclude or disqualify other bidders. Consequently, the credibility of the competitive process is damaged (Boehm and Olaya, 2006; Søreide, 2002).

7.4.2.2 The Formation of the Bid Evaluation Committee

In the absence of guidelines governing the formation of a bid evaluation committee, the committee is usually appointed by the top officials of the procurement departments who themselves are mostly political appointees and are under control of ruling political parties. Therefore, almost all the participants are consistent in saying that Bid evaluation committees have no work independence and are formed in a way to get the desired outcomes of a tendering process. If the top officials are corrupt, they will appoint such members of the bid evaluation team who will obey them in their decisions. If the head of the department wants to bring certain bidders up or down, the staff members, being part of the same hierarchy, will simply collude with him or will be forced to obey him to save their jobs and to avoid other security concerns. Otherwise, such top officials can simply overrule the decisions of bid evaluation committee disregarding the existing procurement rules (Søreide, 2002).

There is a general perception among participants that the top management use their positions to influence bid evaluations which are set up in a way to favour a particular bidder. In addition, procurement officials provide confidential inside information to help the favourite bidder to prepare competitive bid. Clear and predetermined evaluation criteria ensures transparency and fairness, and helps impartial selection and elimination of bidders. But, this can also be used

for selection of favourite bidders and elimination of unwanted competitors. Weights of different components of evaluation criteria are fixed in a way to give more points to favourite bidder, but may not be required by actual project needs. Such criteria can be easily argued to justify the selection process.

7.4.2.3 Cartelisation

There was a general consensus among the interviewees that contractors' pooling/cartelisation is one of the most common corrupt practices during the infrastructure procurement process in Pakistan and there are no rules and regulations available to control that. Pooling is collusion among contractors, who are leading competitors, to inflate the project price. It is the process in which one bidder "buys" his competitors' bids, changes their values, and submits the lowest bid exceeding the market price (de Jong et al., 2009). Usually all short-listed contractors of a tendering process pool in themselves and decide who will be the winner of the contract award. The selected contractor collects his tender and the tenders for all other contractors. Then he fills them all with an exaggerated or higher price while keeping the price of his own tender the lowest one but still much higher than the actual market price of the project. In return, he pays an agreed amount of money to other contractors for allowing him to fill their tenders. This agreed amount actually comes from the exaggerated price of the project. The contractors do so by taking care of all legal requirement and seemingly they all competing well until the final selection day.

7.4.2.4 The Limited use of 'Public Access to Information' and 'Conflict of Interest' Laws

There was a general consensus among the participants, that limited use of "Public Access to Information Act" and "Conflict of Interest Laws" reduces the transparency of the procurement process, thus providing more opportunities for corruption. All type of conflicts of interest are considered to be corruption when a person has direct personal stakes in the outcomes (de Jong et al., 2009). To minimize the risk of conflict of interest occurring, the disclosure of all real and potential conflicts by all stakeholders involved in a project needs to be stated. In Pakistan, such a disclosure is required, but not mandatory, above

certain limits of contract values.. Therefore, a more appropriate view might be to introduce conflict of interest laws at *all* levels of public contracts without putting any threshold contract value for their use.

Similarly, the “Public Access to Information Act” is only applicable at the federal level with limited operational categories. Therefore, its use is also limited especially when the public at large is not familiar with its usage. According to participants’ perceptions, information on public procurements posted in the media is not readily and widely accessible and often lacks essential information. Also, the information is published in a way that it is not user friendly and difficult to understand for the public at large. The websites of procurement agencies are not updated regularly and do not provide current and up-to-date information on projects. Therefore, there is limited public access to public procurements in Pakistan. Access to such information does not necessarily interfere with the confidentiality of information. Moreover, civil society can involve in the procurement monitoring process only when access to relevant information throughout the project life cycle is available.

7.4.2.5 Community Participation in Public Procurement Process

There was a general consensus among the interviewees that community participation during the public infrastructure procurement process in Pakistan is rare due to the unavailability of mechanisms which allow that. Apart from some civil society Non-Government Organisations (NGO’s) working as watchdogs (GoP/NAB, 2002), there is scarcity of civil society involvement in the monitoring public procurement process in Pakistan. This is because the civil society is usually not given the access to the information, supervision, or participation in public procurement processes which in turn affect their communities and country. Allowing public participation in the procurement process is the best mechanism to ensure process integrity. But, the participants also perceived that the contributions from the public for promoting improvements in procurement processes are taken in an insignificant way, thus discouraging civil society to come forward. Although, oversight provided by the electronic and print media plays the role of a whistle-blower to an extent (GoP/NAB, 2002), but in the absence of public participation, windows available

to bring procurement corruption and irregularities in public, are substantially reduced.

7.4.2.6 Role of Donors

Participants perceived that donor agencies should also share the responsibility for corruption control in infrastructure projects. Donors can improve access to project information by implementing their rules and taking action against corrupt officials and black- listing corrupt partners (Butterworth and de la Harpe, 2009). In Pakistan, the donor agencies rush funds to meet aid targets, and turn a blind eye to corruption in projects as their procedures are largely inefficient to deter corruption (Tahir, 2005). In terms of grand corruption, multi-nationals, and the relevant donor countries should share the blame instead of looking at corruption merely as a Pakistani trait. A possible reason for multinationals and the relevant donor countries to do so, is to avoid any conflicts with relevant procurement agencies when their corruption is highlighted, or they are loathe to discontinue the practice fearing that they would lose out to their competitors.

7.4.3 Lack of Institutional Capacity and Honest Leadership

Effective and rigorous project monitoring requires qualified personnel and clearly defined project scope for its on-time and within budget completion. There was a general consensus among the participants that a lack of qualified staff within procurement organisations and scarcity of qualified consultants to assist them, provides more opportunities for corruption. Inefficient staff and consultants can result in poor specification, inefficient bid evaluation and contract award, poor monitoring and approval of project works. According to Susan (Rose-Ackerman, 1999) developing countries may not provide the necessary condition for the competitive bidding process due to the scarcity of economic and human resources, especially when corruption is rampant in the society.

One of the most prevalent reasons for inefficient project managers is perceived to be their bureaucratic background with generalist cadres. It is common practice to post civil servants as project directors who are not adequately

equipped with required technical skills and project management knowledge and trainings (GoP/PC, 2011b). This practice coupled with political appointees results in an even worse situation (GoP/PC, 2011b). These civil servants use infrastructure development projects as stop-gap posting between two field postings. These postings are attractive for them because they provide them plenty of opportunities for self-enrichment. Another cause which is very common to further enhance the problems is the transfer of project managers in the middle of projects. This results in management which is unresponsive to the project objectives. It is perceived that a lack of transparency and accountability also results in overall lowering of professional standards in an organization (Søreide, 2002). In the absence of an effective regulatory body, procurement organisations being a client itself play the role of the regulator to a great extent. Hence, working methods and practices of project directors as the client do not help for effective project management and accountability when the client itself is the cause of project delays and increase in costs.

Also, project monitoring during its execution and ex-post evaluation requires concurrent monitoring through the monthly submission of PC-III during project execution, the PC-IV form (Project Completion Report) on project completion and the PC-V annually for five years after completion (GoP/PC, 2011b). The monitoring cells within public procurement agencies validate this information through desktop review and a physical examination of the site (GoP/PC, 2011b). These departments are hugely understaffed and under-resourced, therefore, cannot perform up to the required standards. It is mandatory to submit PC-III but the completion of PC-IV and PC-V are rare occurrences (GoP/PC, 2011b). There is no tradition of maintaining records showing the frequency of submission of these forms. Such traditions are more often used for corrupt ends in order to deviate from standard practices. One of the participants has remarked that,

“throughout my career I never came across a project where these forms were completed, particularly the PC-V form showing project performance after completion” (IP9).

7.4.3.1 Lack of Honest Leadership

There was a general consensus among the participants that a lack of honest leadership is one of the main causes of corruption in Pakistan. When corruption is prevalent within the top leadership or heads of the departments, it becomes more difficult to find honest officials at lower hierarchical ranks. It becomes more difficult to eradicate petty corruption in bureaucracy where grand corruption at the top level persists (Søreide, 2002). Therefore, it is considered that the fight against corruption must start by the sincere efforts and commitment of prime leadership of the country (Søreide, 2002) as only an honest intention is followed up by good behaviour. Therefore, it is perceived that if you have a credible person at the top, the same credibility will be followed at the bottom because that creates a chain reaction and the whole system follows that. This lack of honest leadership results in the creation of inefficient rules which are intended to generate illegal income. It is perceived that the laws are established to delegate powers and to bring accountability, but the current system concentrates decisions at top level creating congestion and delays (GoP, 2009a).

7.5 Is it common to report procurement corruption and irregularities in Pakistan? If not, why?

There was a general consensus among the interviewees that it is not common to report procurement corruption and irregularities in Pakistan for various reasons as discussed below.

7.5.1 Ineffective Complaint & Verification Mechanisms

There was a general consensus among participants that ineffective complaints and verification mechanisms are the most prevalent reasons for not reporting procurement corruption and irregularities; in addition to its limited access and reliability in Pakistan. An effective complaint and verification mechanism allows involved bidders and the general public to verify if the actions of procurement personnel are in accordance with the prescribed rules and regulations (ADB/OECD, 2006b). Moreover, the availability of such mechanisms to report fraudulent, corrupt and unethical behaviour is essential in detecting and deterring corruption and increases public trust in the fairness of

procedures and institutions (ADB/OECD, 2006b). In Pakistan, the mechanism for handling complaints by aggrieved bidder exists to handle the complaints related to pre-contract issues only (ADB/OECD, 2006b). Apparently, this forum cannot be used to challenge big decisions like the selection of particular procurement method or decisions made as a result of court order or judgement (ADB/OECD, 2006b). According to participants' perception, this lack of motivation in lodging a complaint against procurement organisations is because of fear of future disadvantage in terms of discrimination and retaliation in case all procurement personnel are corrupt and collude.

There are many discrepancies in the current system which undermine its credibility. There are no provisions available by PPR Rules guiding the administrative review mechanism (ADB/OECD, 2006b). Instead, procurement authorities have powers to establish their own procedures (GoP, 2009b). There is no mechanism available for the formation of the administrative review committee (ADB/OECD, 2006b). The review committees are generally appointed by the head of the department and consist of members of the same department. It is perceived that these committees do not have sufficient powers and work independence, i.e. are not autonomous in their decision-making. In addition, the review committees are formed on a case-to-case basis (GoP, 2009a), thus inconsistencies in decisions on similar issues are possible. Moreover, review decisions do not cause any delays or halting of the procurement process (GoP, 2009a). This fact discourages complainants to continue their efforts especially when it takes too long to reach a decision and the mechanism and timeframe prescribing the enforcement of these decisions is also vague (ADB/OECD, 2006b). Moreover, the time for filling a request for review is kept short enough to either discourage or complete complaints. There was a general consensus among the participants that it is difficult for the aggrieved party to collect and verify the facts in given time and to calculate the risks of lodging a complaint. There are no explicit guidelines or penal provisions on what if the administrative body does not decide according to the 'given instructions' (GoP, 2009a). This may be because the 'given instructions' in itself has no provisions by the Public Procurement Regulatory Authority (PPRA).

There is no second level review available other than court of law and administrative review is essential before going to judicial review (ADB/OECD, 2006b).

In order to detect non-supplied, inferior quality, unexecuted or exaggerated quantities of construction work and material, regular and effective reviews by independent audit or supervisory body are essential to complement the complaint mechanism. The availability of a swift and effective audit mechanism is essential to discourage corruption particularly during the procurement planning and delivery phase when there are no potential complainants. Mostly yearly or sometimes after six months audits of procurement agencies are required by Auditor General of Pakistan (AGP) and Chartered Accountants (GoP, 2009a). No other independent bodies are invited to monitor procurement procedures if they are done according to the prescribed laws. Audit reports are usually delayed and when presented to the legislatures hardly receive any attention. This results in the ineffective functioning of the Auditor General Office, which is working merely as a toothless bulldog. This strengthens the perception that public sector audit departments provide a cover for dishonest public officials and in a way that facilitates them in looting government treasuries at different levels.

According to the participants' perceptions, implementation on the recommendations made in audit reports and follow-up for compliance is largely inexistent or substantially delayed. Although internal audits are conducted concurrently with transactions, internal control procedures do not allow for performance audits. It is required to prepare PC-IV (Project Completion Report) & PC-V (Project Reconciliation Report) for every contract. However, it is not common practice to develop these reports, even when prepared, they seldom fulfil the required criteria. In the absence or rare practice of performance audits, it is difficult for auditors to trace corruption.

The effectiveness and functioning of complaint and review mechanisms depends on the availability of complete, properly maintained and reliable documentation of the whole procurement process i.e. starting from procurement planning to the implementation stage. According to the participants'

perceptions, it is common to hide the evidence of fraud or procurement corruption and irregularities, by damaging or misplacing the documents related to procurement process. It is common to destroy such evidence by burning departmental or court's records and blaming the event as a consequence of an accidental fire. Although it is deemed essential to keep a record of documentation on procurement procedures and decisions for at least five years, there are no explicit provisions in law to protect these documents from potential destruction by procurement personnel in their pursuit to hide the evidence of fraud and corruption (ADB/OECD, 2006b). Such documentary evidence is particularly vulnerable in case of large projects which take more time to complete and involve heavy transactions. In the absence of secure storage, it is likely that forged documents may be produced to create legitimate evidence, or poor or distorted records may be produced to weaken the evidence. Consequently, the completeness and reliability of the records becomes doubtful. When such records are available to lodge a complaint against procurement decision, it is likely the complaint will be rejected for technical lack of proof due to weak documentary evidence. Knowing this all, little motivation is left to report procurement corruption and irregularities in Pakistan.

7.5.2 Ineffective Mechanism to Sanction Corrupt Behaviour

There was a general consensus among the interviewees that one of the most prevalent reasons for not reporting procurement corruption and irregularities in Pakistan are ineffective mechanisms to sanction corrupt behaviour. The possibility that decisions cannot be overturned or reversed, renders corruption easier, and together with insufficient sanctions, provide incentives for those who get involve in corruption. On the other hand, effective mechanisms to penalize corrupt behaviours ensures the integrity of the procurement process and encourages reporting procurement corruption and irregularities. The credibility of whole sanctioning mechanisms is undermined when the procurement personnel allow corruption in collusion with the bidding company and are not legally bound to inform the regulatory body about any attempts by the bidders to unduly influence the procurement decisions and undermine the impartiality of the process.

According to participants' perceptions, available sanctions and penalties are not fully enforced. An economic sanction available in Pakistan is to disqualify bidders and blacklist the company for a temporary or indefinite period on providing incomplete, wrong or fake information. However, according to the participants' perceptions, this sanction is not commonly practiced in Pakistan. Even when blacklisted, the company is allowed to work under a different name by the licensing authority (Pakistan Engineering Council) which has no norms of data sharing and works independently to the PPRA conducting the black-listing process. Also, no centrally operating body maintains any eligible contractors' list. Another economic sanction is to debar a company from public contracts for a certain period of time. Although debarment is allowed in Pakistan but no explicit mechanism is provided to do so (ADB/OECD, 2006b). Individual procurement agencies are given the authority to decide how the companies involved in corruption should be debarred that means the administrative decision suffices the right to judicial recourse (GoP, 2009a). Rules are silent on allowing for due process and the right of appeal to aggrieved parties (ADB/OECD, 2006b). While debarment is used to control corruption, same time, it is used to generate bribes and kickbacks for eliminating unwanted bidders. Although, systems to sanction corrupt behaviours do exist, the evidence of punishment lacks substantially except in isolated cases. Evidence of enforcement is particularly meagre in major corruption cases (GoP, 2009a). Moreover, no mechanism is available to hold corrupt procurement officials liable for causing damages to procurement organisation (GoP, 2009a). Therefore, in the absence of explicit rules and due to lenient attitudes, the credibility of this mechanism is largely undermined.

Outside of the procurement agencies, there are anti-corruption institutions to monitor public procurement processes by investigating corruption cases. However, there was a general consensus among the participants that one of the major causes of corruption is a lack of credible anti-corruption institutions which could investigate corruption cases without any interference. The credibility of anti-corruption institutions in Pakistan is doubtful due to likely political interference, hence a lack public trust (GoP/NAB, 2002).

According to the participants' perceptions, people are persecuted or spared on the political basis by these institutions. There is however also a negative to such institutions. According to the participants' perceptions, such institutions can not differentiate between good faith and a bad decision. For instance, if a procurement agency gives relief to the contractor through some contract clause, the anti-corruption bodies always take a negative view of such things assuming that this was done out of bad intentions. One of the main reasons behind such a mind-set is that the staff of anti-corruption institutions are trained for financial criminology due to police or auditors background (GoP/NAB, 2002). These people are not actually experts and trained to identify procurement corruption (GoP/NAB, 2002). In such situation, these institutions become part of the problem instead of becoming a solution.

Moreover, the overall legal and regulatory framework provides general legislation to define responsibilities, accountabilities and penalties for fraud and corruption. According to participants' perceptions, available anti-corruption laws are inexplicit, cumbersome and inconsistent without any special considerations to corruption in procurement processes. This inadequacy of laws, coupled with weaker evidence, renders justified prosecution difficult. Also, loopholes in the system make it easier to circumvent the laws or to cheat. The prosecution system is very slow and so the following are possible: witnesses may turn hostile; lawyers are compromised who put up a weak defence, and/or the judge is compromised at the lower judiciary level. According to Pakistan's anti-corruption laws, the onus of innocence is given to the accused so that he has to prove himself innocent instead of the prosecution proving him guilty. This principle of, "guilty until proven innocent", makes the law a two edge sword, which is used not only to contain corruption but becomes part of corruption when used for political victimization or other vested interests. If somebody is innocent and is not given access to official records to prove his innocence, he will stay behind the bar till the day proven innocent. Moreover, the legal system is not based on 'cost and damages' concept which holds the accusing party liable to pay the cost of damages in case the accused is proven innocent, makes it easier to victimise people for vested interests in the presence of current anti-corruption laws.

7.5.3 No Protection for those who Report Corruption

There was a general consensus among participants that no protection is available to those who report procurement corruption and irregularities in Pakistan. According to one of the participants,

“Corrupt transactions have no traces and documentary evidence to prove and makes it difficult to question when you also comply to all rules and regulations and complete the documentation”(IP1).

It is difficult to detect corruption in the procurement process as it's a chain of hierarchy and not an individual's act. In the event of corruption, subordinates simply obey their boss to save their jobs or to avoid any security issues. Otherwise, they simply collude with their bosses in all corrupt transactions. In addition, there are no arrangements to anonymously collect information on corrupt practices which occur by manipulation of procurement procedures at institutional level (ADB/OECD, 2006b). Although the anonymous information collected through colleagues of corrupt officials is essential to detect corruption (Søreide, 2002), the risk of dishonest information to blacken a certain person and companies also exists. In the absence of proper mechanism to report corruption, other people involved in the tender may also come across corruption (Søreide, 2002). The chances that accusations are based on personal or political interests are high, especially in a society where corruption is rampant.

On the other hand, if the whistle-blower is exposed in such investigations, he is in danger as the arrangements for confidentiality and anonymity to protect potential informants or 'whistle-blowers' are largely inexistent in Pakistan. Most of the time the anonymity is revealed during such investigation and the person is harassed. Therefore, witnesses mostly refuse to come forward in such cases for inadequate protection available in such criminal proceedings (GoP/NAB, 2002). Witness protection becomes the responsibility of the law enforcement agencies as soon as corruption is revealed and charges are placed against the accused. In order to come forward, the whistleblowers must have confidence in the system that they and their families will not be exposed to any form of retribution on testifying about any wrongdoings.

7.5.4 Lack of Integrity & Ethical Education of Procurement Personnel

There was a general consensus among the participants that the mechanism at institutional level, aiming at development and promotion of ethical behaviours among the procurement personnel and private contractors, is largely inexistent, thus lowering the trend of reporting corrupt behaviours. Preventive arrangements at an institutional level, to ensure the proper conduct of the individuals involved in the procurement process and sanctions for corrupt behaviour, are fundamental elements to contain corruption in the procurement process as honest staff, buyer and suppliers are equally important in the running of the system. According to participants' perceptions, there are vested interests for not creating a transparent, responsive and accountable procurement market in Pakistan. Therefore, the requirement to create ethical behaviour and procurement markets known for its integrity lacks sincere and consolidated efforts (GoP, 2009a). It is not common to establish, promote, and thoroughly implement codes of conduct by procurement agencies and bidders in Pakistan. There are no arrangements for specific trainings addressing the risk of corruption and integrity issues and promoting ethical behaviours.

According to participant's perceptions, available provisions on codes of conduct and codes of ethics are not fully enforced. One of the main reasons for their limited use is the fewer number of projects crossing the threshold contract value beyond which their use is essential. It is not mandatory to include the code of conduct clauses in signed contracts with the clients. It is perceived that many times corruption, occurs due to the unawareness or inadequate knowledge of procurement rules and regulations or ethical standards to be followed. Therefore, educating procurement personnel on procurement laws, and required ethical standards can help in containing corruption in procurement processes. Participants also perceived that if procurement personnel are provided attractive career plans, good salaries, on time promotions and timely updated Annual Confidential Reports (ACRs), they will not prefer to get involve in corrupt practices.

7.6 Discussion on Corruption and Performance of Procurement Process

The criteria of good performance requires the project to be completed on time, within budget and up to the required quality standards. Corruption in infrastructure procurement negatively affects project performance. It hampers the project's on time completion within allocated budget and to the required quality standards. The negative effect of corruption is visible from the planning of the project procurement to contract implementation and administration. Overlooking the mandatory requirements of in depth cost-benefit analysis and feasibility study for corrupt ends before starting a new project results in poorly defined project scope and specifications. This leads to changes in project scope and specifications for corrupt ends during project construction and creates more variation orders to lower project cost and increase its benefits.

Cumbersome and outdated approval processes are delayed and deliberately misused for corrupt ends by procurement personnel to generate kickbacks. The contractors compensate amounts paid in kickbacks during project construction when they compromise on work quality to lower their cost. The contractors also delay project completion deadlines particularly in projects where required finance is not available in full and on-time. When contractors already know that project is being started without sufficient funds availability, they try to delay project completion in a view to claim escalation money. In addition, they deliver sub-standard work to compensate delays in project payments.

In the case of open bidding, tender advertisements in low circulation newspapers calls for fewer participants hence increasing project costs. Tender documents may be prepared to favour particular bidders or the multiplicity of contract templates being used allows for biased contract documents. In addition, the short bidding periods result in the selection of bids which is not value for money due to less participation and less time to prepare competitive bid. In the absence of competitive bids, the procurement personnel has more choice to go for re-tendering or to go for negotiated procedures or direct purchase. In such situation, the projects started with direct-purchase or single-sourcing are more likely to cost more due to collusion between procurement

personnel and private contractors. The contractors charge prices higher than the available market prices due to the monopoly they have on it. Bid negotiations provide further chances to get approval of contract clauses which are more agreeable to the contractor or to readjust project prices in collusion with procurement personnel for personal gain in lateral stages of project construction.

In open tendering, when the contract is awarded to the lowest evaluated bid, chances are a contractor in collusion with procurement personnel submits a bid which is artificially low and the price is re-adjusted during negotiations on the name of technical changes. Also, the contractors may pool themselves to work like a cartel and inflate the project price. Even when a lowest bid is selected through a competitive process, it is highly likely that the contractor must have cut every corner to offer a price only to win a contract especially when the contract value is large. It is likely that the contractor will try to lower its cost and increase benefits by lowering the work quality. Above all, chances are a bid evaluation committee may set such an evaluation criteria that fits only a particular bidder to award the contract to favourite bidder through an open competitive tendering process.

Moreover, collusion between project director, contractor and consultant may result in project delays which they all can use for corrupt ends. The situation gets worse when the same consultants who prepared the project feasibility report and tender documents, are still engaged during project execution phase. Contractors may approach consultants for approval of inferior quality, unexecuted and exaggerated quantities of material. In addition, they may ask consultants for more changes in project scope and specifications to create more variation orders. Contractors may also bribe procurement personnel for fast approval of payment certificates and compensate their money paid in bribes by lowering work quality or unsatisfactory project completion. In all such situations, the overall project cost and quality is damaged and its completion is delayed which eventually increases the maintenance cost over the life cycle of the project or the expected service quality is not delivered to the end user.

The situation gets worse in the absence of ineffective complaints and verification mechanisms. In the absence of mechanisms providing more benefits for staying away from corruption and more risk of being caught and being penalized, there is more incentive for those who get involve in corrupt transactions. Also, the lack of scrutiny by civil society and media, the risk of being caught in corrupt transaction is substantially lowered. Moreover, in the presence of corrupt leadership, it becomes almost impossible to eradicate corruption from staff lower down the hierarchy and in overall society. This situation is quite understandable when those who are supposed to regulate the system and penalise corrupt behaviour are themselves part of these practices and are actual beneficiaries of an ineffective legal and regulatory system.

7.7 Summary

This chapter highlights the causes of corruption in infrastructure procurement process in Pakistan. Inadequacy and non-implementation of procurement rules and regulations are perceived to be one of the most prevalent causes that facilitate corruption in infrastructure procurement process in Pakistan. This chapter also discusses the most prevalent forms of corruption in infrastructure procurement process and the reasons for not reporting procurement corruption and irregularities in Pakistan

8 Framework of Corruption Control

8.1 Introduction

This chapter presents a framework based on the outcomes of this research project and an adaptation of Cavill and Sohail, (2007a), designed to help a party (whether at individual, group or organisation level) who is interested in avoiding or minimising potential corruption which may occur during an infrastructure procurement process in general and for Pakistan in particular. The findings of this research work, as discussed under Sections 6.3 and 6.4 in Chapter 6 and Sections 7.4 and 7.5 in Chapter 7, mainly provide a starting point for data input during the processing of this framework to control corruption in infrastructure procurement particularly in Pakistan. Hence, the development of this framework is in fulfilment of the research objectives as described under Section 1.4 in chapter one. Moreover, using this framework, infrastructure procurement processes can more effectively incorporate new knowledge in to corruption identification and anti-corruption strategies. This should enable project administrators/monitors/regulators to predict potential corruption areas, and provide a valuable body of knowledge to promote good procurement practices and anti-corruption measures. The detailed description of the framework is provided in Section 8.2.

8.2 Framework of Corruption Control

The framework for corruption control is based on the concept of the information feedback process. In essence it encompasses the following: any bad/corrupt procurement practices or decisions (when applying particular procurement processes or procedures) within a particular work process, as discussed under Section 3.5 in Chapter 3 in general and Sections 6.3 and 6.4 in Chapter 6 for Pakistan in particular, can be detected/identified/recognised and utilised as a lesson learned to improve the said processes or procedures in a later and similar work process or situation. Similarly, this principle of information feedback can be applied to any particular procurement aspect of an infrastructure procurement process where common elements such as procedures and processes are implemented.

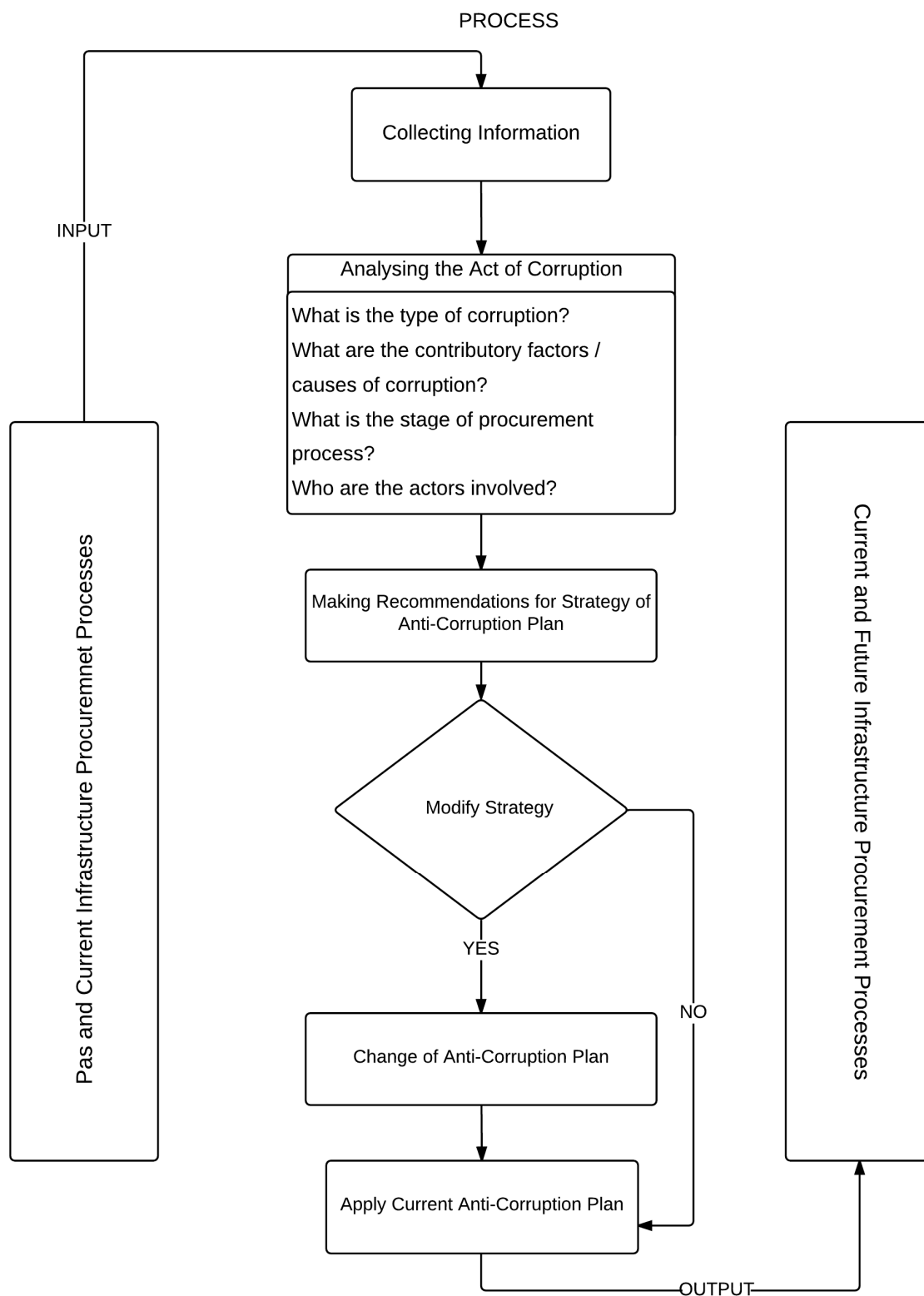


Figure 8-1: Framework of Corruption Control

This framework is designed essentially to flag up the corrupt actions, as discussed under Sections 6.3 and 6.4 in Chapter 6 for Pakistan in particular, which can be considered as a source of knowledge resulting from bad procurement practices from which lessons can be learned. This will enable project administrators/regulators/monitors to become more aware of the specific problems and produce proactive anticorruption decisions in the form of effective anti-corruption strategies which can be considered as an output to be used to avoid persistent reoccurrences of potential causes of corruption, as discussed under Section 7.4 in Chapter 7 for Pakistan in particular, in current or future infrastructure procurement processes.

An effective anti-corruption plan depends on the diagnosis and understanding of the infrastructure procurement process. The objective of this framework is to understand, explore and act on corruption to prevent or minimise its effects in the infrastructure procurement process. The prevention or mitigation strategies are derived from literature review as described in Section 3.8 of Chapter 3, and relating them systematically to various aspects of the infrastructure procurement process. This framework should fill the urgent need expressed by policy makers, professional staff and regulators (Cavill and Sohail, 2007a). A full description of how the framework works is provided in Section 8.3 below.

8.3 How the Framework Operates

The conceptual framework, as indicated in Figure 8.1, represents a sequential decision making process, however, this should not be interpreted as a mere string of sequential activities. Actually, the process is more mixed-up, with possible overlaps across phases (Cavill and Sohail, 2007a).

8.3.1 Users/Operators of the Framework

This framework can be adopted by any individual, team or organisation concerned with identifying corruption and preventing or minimizing its impact early in the strategic phases of any infrastructure procurement process. The key anticipated users/operators of this framework, according to Cavill and Sohail, (2007a) include:

- Policy makers
- Professional staff or procurement personnel
- Regulators

8.3.2 Collecting Information

The first unit contained within the working process of this framework is called Collecting Information unit. Its primary aim is to collect information, namely data concerning the location of corruption occurrences. This information or data should be collected with the help of project participants or those who have already experienced or are familiar with corruption in infrastructure procurement processes possibly as a result of their involvement in similar processes in the past.

To identify where corruption is occurring, Cavill and Sohail, (2007a) mention following possible sources to collect information:

- First, collect and analyse the secondary data e.g. official reports, press articles and research documents, for information.
- Surveys can be conducted in general. Three common models that exist are:
 - a. Independent civil society organizations (such as national chapters of Transparency International) undertake the initiative.
 - b. Service providers themselves seek client feedback directly; and
 - c. An oversight agency undertakes the initiative.
- Interviews can also be conducted with a wide range of participants or project stakeholders e.g. professionals, contractors, researchers, representatives of elected bodies, civil society and community organisations etc.
- Interviewing those who have been convicted and sentenced in infrastructure procurement related corruption cases, may also be considered on certain occasions.

- Focus group discussions with project stakeholders may also be conducted to find their perception of corruption in infrastructure procurement and the ways to minimise it.

In addition, Susan Rose-Ackerman, (1978) has collected such information through the media in the form of a report in the newspaper or electronic media regarding an event of corruption in some organisation.

The findings of this research study regarding the types and nature of the most frequent corrupt practices occurring during traditional and PPP routes of infrastructure procurement in Pakistan, as discussed under Sections 6.3. and 6.4 in Chapter 6; and causes behind, as discussed under Sections 7.4 and 7.5 in Chapter 7, may also be utilised as a starting point for data input in ‘Collecting Information Unit’ for Pakistan in particular.

Therefore, in this framework, all potential data sources are gathered together and considered as data input. These combined data sources need to be generated by the framework administrator with the responsibility of implementing the framework. For this framework to be properly operationalised, the framework administrator must begin to feed it with the required inputs which are in essence, the knowledge and experiences of past events and practices within the context of previous infrastructure procurement processes.

8.3.3 Analysing the Act of Corruption

As soon as the framework administrator has collected all the information, s/he can begin to undertake an analysis of the act of corruption to ascertain whether there is the possibility that these may arise in future procurement processes. This analysis is performed in what is called the Analysing the Act of the Corruption unit as shown in Figure 8.1.

In order to conduct this analysis, the framework administrator should engage in deep examination of the issues by asking four questions for each type of corrupt action reported. These four questions are as follow:

1. What is the type of corruption?

The corrupt practices identified under Section 3.5 in Chapter 3 in general and sections 6.3 and 6.4 in Chapter 6 for Pakistan in particular, provide the types of corruption to watch out by the framework administrator. Generally, many of these types of corruption occur together. Therefore, even a reduction of a few types of corruption in the infrastructure procurement process can result in significant cost savings and availability of potential increase in resources to provide more public goods. Cavill and Sohail, (2007a) also include this parameter while analysing an act of corruption and formulating an anti-corruption plan.

2. What are the contributory factors/causes of corruption?

So many factors contribute to corruption as mentioned under Section 3.6 in Chapter 3 in general and Sections 7.4 and 7.5 in Chapter 7 for Pakistan in particular. The framework administrator should dig up what causes of corruption have led to a particular type of corruption occurring during any stage of the procurement process as discussed under Section 9.3.1 in Chapter 9 for Pakistan in particular. Cavill and Sohail, (2007a) also include this parameter while analysing an act of corruption and formulating an anti-corruption plan.

3. What is the stage of the procurement process?

Although Cavill and Sohail, (2007a) do not consider this parameter while formulating the anti-corruption plan, they do consider this while identifying different types of corruption throughout a project life cycle. Therefore, it is important for the framework administrator to classify different types of corrupt actions occurring during different stages of the procurement process, as described under Section 3.5 in Chapter 3 in general and Sections 6.3 and 6.4 in Chapter 6 for Pakistan in particular.

Stages of the procurement process may include:

- Pre-bidding/planning stage
- Bidding/tendering stage
- Post-bidding/contract administration and implementation stage

4. Who are the actors involved?

Although Cavill and Sohail, (2007a) do not consider this parameter while formulating the anti-corruption plan, they mention the analysis of actors involved in an act of corruption in order to understand an act of corruption. As corruption requires a demander and a receiver, identifying all potential actors (as mentioned under Section 3.5.1 in Chapter Three), may also be valuable information for framework administrator, while analysing the act of corruption.

8.3.4 Making Recommendations for Anti-Corruption Plan

Once the analysis of the act of corruption is completed, the next step of the framework process requires the decision on what should be done and formulating recommendations for possible strategies of anti-corruption plan, which are based on the identification and analysis conducted in first two steps. This process is established in a separate unit within the framework called ‘Making Recommendations for Anti-Corruption Plan’.

At this point, the anti-corruption strategy ideas are brought into play so that each act of corruption is given a suggested strategy to ensure its avoidance in future projects. Cavill and Sohail, (2007a) recommend the use of different anti-corruption tools at this stage as elaborated by them. As soon as these recommendations are ready, the framework administrator is expected to conduct a physical testing exercise to find whether the strategic ideas are capable of implementation without amendment or whether they need modification. This testing process is entitled ‘Modify Strategy?’ as shown in Figure 8.1. If the test results of any particular strategic anti-corruption idea emerge as positive, then the strategy is passed to the next unit in the framework which is called ‘Change of Anti-Corruption Plan’. On the other hand, if the result is negative, the strategy idea is not considered suitable for the application, and will remain as a

current project anti-corruption plan with no recommendation for its amendment in any way.

The primary aim of the ‘Change of Anti-Corruption Plan’ unit is to take decisions regarding the action necessary for changes to the existing anti-corruption practices of the project. In this respect, certain actions may need to be taken regarding project monitoring, local or national laws, procurement regulations, and so on, all of which may need to be modified in order to increase the possibility that potential corruption within future projects can be reduced or prevented. At the same time, some of these ideas may relate to a decision that has to be taken by an external organisation, such as a regulatory body, federal or local authority or a donor, etc., and in such circumstances that an organisation might wish to conduct its own investigations to ensure the ideas are feasible and can be adopted. Therefore, the findings/results are to be shared with multiple stakeholders to arrive at a decision about how to formulate anti-corruption plan. Examples of possible anti-corruption strategies that can be applied or modified to avoid corruption are pointed out under Section 3.8 in Chapter Three.

After the required planning and decision-making associated with the implementation of an amendment of the strategic anti-corruption idea has occurred, the next stage in the framework – Apply Current Anti-Corruption Plan – unit is approached. This is the final stage during which the strategic anti-corruption ideas identified as pertinent to address the potential corruption in infrastructure procurement processes, are implemented. Finally, as the framework becomes more mature with use and its accumulation of more information gathered about previous procurement processes, so too does the store of knowledge regarding potential ways of making improvements in the fight to prevent or reduce potential corruption become greater. This represents a valuable learning process which arises from continually seeking to enhance the chances of success in combating corruption in the infrastructure procurement process. Armed with this feedback mechanism, anti-corruption strategists are able to proceed with more efficient corruption and strategy analysis, enabling

them to investigate new areas of corruption and to produce further recommendations in terms of how to prevent or minimise these.

8.4 Validation of the Framework

To ensure the quality of research, validation is an important process to be done. This is normally undertaken at the final stages of the research work. Table 7.1 shows the results obtained from the validation questionnaire survey.

Table 8-1: Results of the Framework Validation Questionnaire Survey

Validation Aspect	Id of the Respondents									Mean
	1	2	3	4	5	6	7	8	9	
1. Degree of appropriateness	2	5	4	3	4	4	4	4	4	3.78
2. Degree of objectivity	3	5	4	4	4	4	3	3	3	3.67
3. Degree of replicability	2	4	4	4	4	4	3	2	3	3.33
4. Degree of practicality	2	4	4	3	4	4	4	3	4	3.56
5. Overall reliability	3	4	4	3	4	4	2	3	4	3.44
6. Overall suitability for procurement process of infrastructure projects in Pakistan	3	4	3	4	4	4	4	3	4	3.67

The respondents were asked to rate six aspects of the framework on a Likert scale of 1 to 5. A score above “3” would represent satisfactory performance for that aspect. The results showed that all aspects were rated above “3”. The aspect rated highest was “Degree of appropriateness” at 3.78. Rated the lowest by respondents was the “Degree of replicability” at 3.33. Therefore it can be construed that the newly developed Framework for Corruption Control was validated to be appropriate, objective, replicable, reliable, and suitable for controlling corruption in the infrastructure procurement process in Pakistan.

8.5 Summary

Cavill and Sohail, (2007a) provide an outline of developing such an anti-corruption plan, but they do not talk about a feedback process as explained here in Figure 8.1. It is a basic and common principle of the feedback process concept that any knowledge obtained from experience and past infrastructure procurement processes can be employed to improve similar procurement

processes in the present or future. In the same way, the experience gained by project participants from procurement processes can be employed to develop new anti-corruption strategies and procurement regulations in order to avoid or at least minimise any damage that might be incurred from corruption in future infrastructure projects.

The more the framework operates and is provided with more corruption data (nature and causes of corruption), the greater the cumulative knowledge which can be established, therefore reducing the risks and uncertainties often associated with lack of knowledge. In addition, this will hopefully enable project administrators/regulators/monitors to predict potential risk areas in the procurement process vulnerable to corruption, as well as provide a valuable body of knowledge to promote good procurement practices and anti-corruption measures.

9 Conclusions and Recommendations

9.1 Introduction

From the discussion and analysis presented under Sections 6.5 and 6.6 in Chapter Six and Sections 7.5 and 7.6 in Chapter Seven, it can be asserted that corruption and ubiquitous causes of corruption exist within the procurement of infrastructure projects in Pakistan and in all the major stages of the process. In an effort to deal with this problem, this study has suggested a number of anti-corruption strategies (see chapter 3) which are offered as a set of recommendations for implementation. These strategies are derived from a detailed exploration of the potential corrupt actions and their causes, and are considered to either prevent corruption or at least minimise its likelihood or occurrence.

In addition, institutional trust-building mechanisms are proposed in the context of the infrastructure procurement market in Pakistan under Section 6.7 in Chapter six. It was found that the provision of these institutional mechanisms can help greatly in building trust in institutions which may have reduced due to perceived level of corruption in procurement of infrastructure projects in Pakistan.

This chapter concludes the thesis by reviewing the research objectives and the methods employed to fulfil these objectives. The main findings of the study are analysed followed by the value and significance of the research. Limitations of the study are also highlighted and finally recommendations are made for future research work.

9.2 Fulfilment of the Research Objectives

For convenience, the objectives of this study are now repeated.

1. To investigate the risk of corruption and its various causes during procurement of both, traditional and PPP infrastructure projects in Pakistan.
2. To investigate the way to enhance institutional-based trust between the participants of the procurement process in Pakistan.

3. To develop a generic framework to control corruption during infrastructure procurement process in general and for Pakistan in particular.

Table 9.1 shows the relationship between the research objectives and the methods used to achieve them. To achieve the research objectives, several activities were carried out during the research period.

Table 9-1: Relationships between the Research Objectives and Methods employed

No.	Research Objectives	Research Method(s)		
		Literature Review (Chapters 2,3,4)	Questionnaire Survey (Chapter 6)	Interviews (Chapter 7)
1	To investigate the risk of corruption and its various causes during procurement of both, traditional and PPP infrastructure projects in Pakistan.	✓	✓	✓
2	To investigate the way to enhance institutional-based trust between the participants of the procurement process in Pakistan.	✓	✓	
3	To develop a generic framework to control corruption during infrastructure procurement process in general and for Pakistan in particular.	✓	✓	✓

In Chapter One, an indication of how the research was formulated was provided. Specifically, the background to the study, the rationale for pursuing it, its aim, objectives, and scope, were all presented.

In Chapter Two, a comprehensive review of the infrastructure procurement regulatory regime was provided, while highlighting the presence of corruption in the Pakistan. A comprehensive literature review of the various types of corrupt actions and the causes behind their occurrence during procurement of infrastructure projects was undertaken and documented in Chapter Three. This was intended to aid with the development of an understanding of the theoretical background supporting the work in subsequent chapters, and helping in the

formulation of the research questions. Chapter Three specifically addressed the theoretical paradigm of an act of corruption, its occurrence in infrastructure procurement process and the causes behind i.e. the existence of discretionary powers and opportunities for seeking economic rent, and weaknesses in regulatory and governing system, are all discussed. All of these causes were shown to be capable of being used as the basis for analysing an act of corruption. In addition, strategies to prevent or minimise corruption are also presented in this chapter. A further literature review of institutional trust-building mechanisms in the context of infrastructure procurement market was undertaken in Chapter four.

The research methodology was described in Chapter Five highlighting several processes undertaken, as well as the approach undertaken to obtain data from individuals working within the infrastructure sector in Pakistan, namely through the use of a questionnaire survey and semi-structured interviews. Additionally the chapter indicates how the data was processed and analysed, thereby outlining the academic rigour of the study. The analysis and discussion of the questionnaire survey was presented in Chapter Six. The findings from the fifteen semi-structured interviews were presented and discussed in Chapter Seven.

Chapter Eight presents a framework based on the outcomes of this research project and is an adaptation of Cavill and Sohail, (2007a), designed to help those professionals participating in the infrastructure procurement process, whether at individual, group or organisation level, who are interested in avoiding or minimising potential corruption which may occur during any infrastructure procurement process. Finally, this chapter i.e. Chapter Nine presents the conclusions and study recommendations while highlighting the significance and limitations of the study.

9.3 Summary of the Main Findings and Conclusions

In the following, the main findings of the research contributing to the knowledge gap as identified in Chapter Two, Three and Four are presented.

9.3.1 Objective 1

To investigate the risk of corruption and its various causes during procurement of both, traditional and PPP infrastructure projects in Pakistan.

The questionnaire survey revealed the top twenty most frequent corrupt practices separately for traditional and PPP infrastructure procurement processes in Pakistan. A thorough analysis and discussion of these corrupt practices is presented in Chapter Six which led to the classification of these corrupt practices into three categories based on the nature of the cause for their occurrence. These categories of potential corrupt practices include:

Potential Corrupt Practices related to the:

1. Lack of Transparency and Fairness
2. Manipulation to Procurement Rules and Contractual Obligations
3. Lack of Professional Integrity/Ethical Behaviour

The results of the interviews with the various stakeholders working as client representatives, consultants, contractors and researchers involved in infrastructure procurement processes in Pakistan revealed different causes that facilitate corruption during procurement of infrastructure projects in Pakistan. A thorough analysis and discussion of these causes is presented in Chapter Seven which led to the categorisation of these causes based on their nature of occurrence. The causes of corruption are broadly categorised under following categories:

1. Ineffective and Inadequate Procurement Rules
2. Weakness in Implementation System
3. Lack of Institutional Capacity and Honest Leadership

A close observation of the categories obtained from the classification of potential corrupt practices based on the nature of the cause for their occurrence and the categories of causes of corruption shows that they are closely linked to each other as shown in Table 9.1

Table 9-2: Relating Causes of Corruption with Potential Corrupt Practices

Causes of Corruption	Potential Corrupt Practices
Weakness in Implementation System	Manipulation to Procurement Rules and Contractual Obligations
1- Deviations from Mandatory Requirements of Project Planning and Approval Laws i) Overlooking In-depth Cost-Benefit Analysis Requirements ii) Overlooking Adequate Feasibility Study Requirements iii) Overlooking Requirements of Sufficient Project Funds Availability 2- Deviations from Competitive/Open Bidding Procedures 3- Deviations from Rules on Tender Advertisement & Bidding Period 4- Bid Opening Process 5- Delays in Project Payments 6- Fragmented Regulatory Regime i) Limited Coverage of Public Procurement Rules ii) Multiplicity of Bidding Documents iii) Jurisdiction Overlap	1- To accept unsolicited bids leading to sub-optimal project design and construction. 2- To under-estimate initial project cost for planning approval by government. 3- To identify and prioritize projects based on vested interests of parties involved. 4- To decide land use & price (as agriculture, residential or commercial) based on vested interests of parties involved. 5- To approve favourable environmental impact assessment/planning proposal. 6- To certify procurement process unnecessarily urgent to avoid requirement of competitive bidding procedure. 7- To set-up front company or as joint venture company or to create 'Fictitious Companies' to bid or allowing multiple bids under different names by same contractor to show competitive bidding process.
Ineffective and Inadequate Procurement Rules	Lack of Transparency and Fairness
1- Pre-Qualification, Qualification and Disqualification of Contractors 2- Formation of Bid Evaluation Committee 3- Cartelisation 4- Limited use of 'Public Access to Information' and 'Conflict of Interest' Laws 5- Community Participation in Public Procurement Process	1- To hire favourite consulting services for project feasibility study and preparation of specifications/bid documents. 2- To approve overdesigned or inflated cost of project. 3- To set evaluation criteria to fit particular bidder. 4- To prepare tender documents in a way to favour private contractor/consortium. 5- To award contract to favourite bidder. 6- To misrepresent the facts and revenues of private contractors/consortium during bidding process. 7- To award long term unjustified incentives to concessionaire/private consortium. 8- To negotiate or renegotiate contract by one party or several to secure more favourable terms.
Lack of Institutional Capacity and Honest Leadership	Lack of Professional Integrity/Ethical Behaviour
	1- To leak confidential inside information to help favourite bidder to prepare competitive bid. 2- To approve construction work and services below standard specifications. 3- To approve unjustified design and specification changes to create more variation orders. 4- To approve unjustified extensions in project execution/financial closure deadlines. 5- To approve claims for false invoices of non-supplied, inferior quality or inflated cost of construction material & equipment or unexecuted or exaggerated quantities of construction work. 6- To approve in advance/speedy payment claims for project works. 7- To change subcontractor/allowing sub-letting of construction work to petty contractors.

It is worth noting that all 20 potential corrupt practices are occurring due to most of the causes of corruption mentioned under its different categories as shown in Table 9.1. The potential corrupt practices occurring due to the ‘manipulation of procurement rules and contractual obligations’ are related to the causes of corruption due to the ‘weaknesses in the implementation system’ during the procurement of infrastructure projects in Pakistan. This may be because the manipulations to procurement rules and contractual obligations are only possible when there is weakness in the implementation system. For instance, any “deviations from competitive/open bidding procedures” may result in corrupt practices in the form of “certifying procurement process unnecessarily urgent to avoid requirement of competitive bidding procedure.”

The potential corrupt practices occurring due to the ‘lack of transparency and fairness’ are related to the causes of corruption due to ‘ineffective and inadequate procurement rules’. This may be because the inadequacy of procurement rules creates a lack of transparency, whereas their ineffective implementation provides fertile ground for the lack of fairness during the procurement process. For instance, ineffective and inadequate procurement rules during bidders’ qualification may result in corrupt practices in the form of “setting evaluation criteria to fit particular bidder”.

Similarly, the potential corrupt practices occurring due to the ‘lack of professional integrity/ethical behaviour’ are related to the causes of corruption due to the ‘lack of institutional capacity and honest leadership’. This may be because the corrupt heads propagate corrupt behaviour among the employees and lack of institutional capacity is reflected in a lack of professional integrity or ethical behaviour. For instance, lack of institutional capacity and honest leadership may result in corrupt practices in the form of “changing subcontractor/allowing sub-letting of construction work to petty contractors”.

The findings of the interview exercise also revealed that people in Pakistan prefer not to report corruption and irregularities in procurement process for various reasons as given below:

1. Ineffective Complaint & Verification Mechanisms
2. Ineffective Mechanisms to Sanction Corrupt Behaviour
3. No Protection for those who Report Corruption
4. Lack of Integrity & Ethical Education of Procurement Personnel

In order to prevent corruption in infrastructure procurement, the desired mitigation strategies in the form of good procurement practices have been presented and discussed in detail in Chapter Three.

9.3.2 Objective 2

To investigate the way to enhance institutional-based trust between the participants of the procurement process in Pakistan.

The questionnaire survey proposed and measured the perceived level of ‘institutional trust-building mechanisms’ in the context of infrastructure procurement market in Pakistan. The perceived level of ‘institutional trust’ in the context of infrastructure procurement market was measured through following indicators:

1. Perceived Monitoring
2. Perceived Accreditation
3. Perceived Legal Bonds
4. Perceived Feedback
5. Perceived Cooperative Norms

Each indicator was measured through available structural mechanisms during procurement of infrastructure projects in Pakistan. The statistical results show that respondents do not have much confidence in public procurement institutions due to the perception of corruption in infrastructure procurement in Pakistan. This is a very common observation in countries with presence of corruption that people lose trust in public institutions. This quantification of

‘institutional trust’ in the context of infrastructure procurement market in Pakistan would provide basis for building and maintaining institutional trust-building mechanisms by their effective enforcement during infrastructure procurement process.

9.3.3 Objective 3

To develop a generic framework to control corruption during infrastructure procurement process in general and for Pakistan in particular.

The framework has been developed and presented in Chapter Eight. This framework can be adopted by any individual, team or organisation concerned with identifying corruption and preventing or minimizing its impact at any stage of infrastructure procurement process in general and for Pakistan in particular. The framework for corruption control is based on the concept of the information feedback process, whereby, for example, any bad/corrupt procurement practices or decisions when applying particular procurement processes or procedures, and so on within a particular work process can be detected/identified/recognised and utilised as a lesson learned to improve the said processes or procedures in a later and similar work process or situation. Similarly, this principle of information feedback can be applied to any particular procurement aspect of an infrastructure procurement process where common elements such as procedures and processes are implemented.

9.4 Significance of the Study and Knowledge Contribution

The results of this study concluded that there are various corrupt practices which are likely to occur during the procurement of infrastructure projects in Pakistan. These corrupt actions occur due to various reasons/causes behind which appear at any stage of the procurement process. Therefore, it is important to recognise that project administrators need to be proactive in searching out potential areas vulnerable to corruption and having several strategies ready for use should any of those potential areas provide opportunities for potential corruption. This research study has filled the knowledge gap through identifying the top twenty potential corrupt practices in traditional and PPP

infrastructure procurement processes in Pakistan and explored the causes behind their occurrence. The study also recommends the solutions to mitigate this problem throughout the life cycle of procurement process. The study also explores the institutional trust-building mechanisms in the context of infrastructure procurement market in Pakistan to cater for the likely loss in trust due to perceived level of corruption in this sector. To date, little attention has been devoted to identifying potential corrupt practices, the causes behind, the mitigation strategies, and the institutional trust-building mechanisms in the context of procurement of infrastructure projects in Pakistan.

According to the best knowledge of the author, no studies have been carried out on the comparison of potential corrupt practices in traditional and PPP infrastructure procurement processes and the causes behind, in addition to the institutional trust-building mechanisms to enhance institutional-based trust between the participants of the procurement process in Pakistan. The solutions to control corruption were suggested based on the literature review, questionnaire surveys and interviews. This study has also introduced a generic model of corruption control based on previous studies to prevent or minimise corruption in infrastructure procurement process in general and particularly in Pakistan. The framework does not intend to introduce new alternatives but instead builds on existing practices so that users can more easily adapt to the improvement. The findings are believed to be useful for all practitioners who are either considering or currently involved in infrastructure procurement process in Pakistan and trying to avoid or minimise the influence of corruption.

9.5 Research Limitations

There are several limitations to the research as outlined below:

- A large number of questionnaire responses would have increased the credibility of the research from the survey analysis.
- The information was not easily accessible due to the sensitivity of the research topic. However, the results would have been more representative if some case studies could have been conducted. But, due to time limitation this was not possible.

- Because of time constraints, the researcher chose to conduct 15 interviews to investigate causes of corruption in infrastructure procurement process in Pakistan. However, a larger number of interviews would have possibly uncovered more causes of corruption, and hence a more comprehensive understanding of corruption and the causes behind its incidence, as well as the ideas for anti-corruption strategies within the context of Pakistan, would be gained.
- Owing to the distance involved, some of the interviews were conducted on telephone and Skype. It would be better if all the interviews would have been conducted face-to-face. Despite these difficulties, a meaningful analysis has still been carried out.
- It should be noted that, the use of a non-deductive research method as part of some inquiries of this research, it is actually difficult to make concrete generalisations about the results obtained in terms of the entire industry. Nevertheless, the results secured from the analysis can be considered as indicative of general patterns or trends.

9.6 Recommendations for Future Research

This research has contributed a survey based region/country specific study of corruption, however, there remains the opportunity for further research of this kind. The following further research is recommended:

- An experiment based research may investigate the estimated cost of the waste arising from corruption and its consequences.
- A deeper case-study approach may cut across different projects to provide more evidence of corruption and the causes behind.
- Any further research investigating practitioners' storyline on the adverse selection and the moral hazards as consequence of corruption may help to explain how the choices are shaped from the role of individuals adopted in the organisations.
- Any future research with large representative samples would be of further help in supporting the generalisations already made in this study.

- Any further research repeating the survey instruments adopted for this research in other jurisdictions and with large representative samples would be helpful to enable comparisons and supporting the generalisations already made in this study.
- Future research may explore and measure further institutional trust-building mechanisms in the context of infrastructure procurement market.
- The corruption control framework presented in this study should be further refined for different projects according to their size, type, government's political and budgetary strength, time etc. to investigate and mitigate corruption. Currently it is for general projects only.

References

- Aaker, J. L., & Sengupta, J. (2000). Additivity Versus Attenuation: The Role of Culture in the Resolution of Information Incongruity. *Journal of Consumer Psychology*, 9(2), 67–82.
- Abdolmohammadi, M., Gabhart, D. R. L., & Reeves, M. F. (1997). Ethical Cognition of Business Students Individually and in Groups. *Journal of Business Ethics*, 16(16), 1717–1725.
- Achua, J. K. (2011). Anti-Corruption in Public Procurement in Nigeria: Challenges and Competency Strategies, 11(3), 323–353.
- ADB. (2009). *Special Evaluation Study on ADB Assistance for Public-Private Partnership in Infrastructure Development - Potential for More Success*. Independent Evaluation Department, Asian Development Bank.
- ADB/OECD. (2006a). *Curbing Corruption in Public Procurement in Asia and the Pacific Progress and Challenges in 25 Countries*. Asian Development Bank, Organization of Economic Co-Operation and Development.
- ADB/OECD. (2006b). *Thematic Review on Provisions and Practices to Curb Corruption in Public Procurement Self-Assessment Report Pakistan*. Asian Development Bank, Organization of Economic Co-Operation and Development.
- Adsera, A., Boix, C., & Payne, M. (2003). Are You Being Served? Political Accountability and Quality of Government. *Journal of Law, Economics, and Organization*, 19(2), 445–490.
- Ahmed, M., Chung, K. Y., & Eichenseher, J. W. (2003). Business Students' Perception of Ethics and Moral Judgment: A Cross-Cultural Study. *Journal of Business Ethics*, 43(1-2), 89–102.

- Ahmed, S. M., Ahmad, R., & Saram, D. D. (1999). Risk management trends in the Hong Kong construction industry: a comparison of contractors and owners perceptions. *Engineering, Construction and Architectural Management*, 6(3), 225–234.
- Ahmed, V., Abbas, A., & Zeshan, M. (2013). *Public Infrastructure and Economic Growth in Pakistan: A Dynamic CGE- Microsimulation Analysis* (Working Paper No. 1). Partnership for Economic Policy.
- Aidt, T. S. (2003). Economic Analysis of Corruption: A Survey. *The Economic Journal*, 113(491), 632–652.
- Aidt, T. S. (2011). *The Causes of Corruption* (DICE Report No. 2) (pp. 15–19). Munich: Center for Economic Studies, Ifo Institute.
- Akintoye, A. S., & MacLeod, M. J. (1997). Risk Analysis and Management in Construction. *International Journal of Project Management*, 15(1), 31–38.
- Akintoye, A., Taylor, C., & Fitzgerald, E. (1998). Risk Analysis and Management of Private Finance Initiative Projects. *Engineering, Construction and Architectural Management*, 5(1), 9–21.
- Anderson, C. J., & Tverdova, Y. V. (2003). Corruption, Political Allegiances, and Attitudes Toward Government in Contemporary Democracies. *American Journal of Political Science*, 47(1), 91–109.
- Andres, L. A., Guasch, J. L., Haven, T., & Foster, V. (2008). *The Impact of Private Sector Participation in Infrastructure: Lights, Shadows, and The Road Ahead* (pp. 1–382). The World Bank.
- Andvig, J. C. (1995). Corruption in the North Sea Oil Industry: Issues and Assessments. *Crime, Law and Social Change*, 23(4), 289–313.
- Andvig, J. C., & Fjeldstad, O.-H. (2001). *Corruption: A Review of Contemporary Research*. Chr. Michelsen Institute, Development Studies and Human Rights.

- Andvig, J. C., Fjeldstad, O.-H., Amundsen, I., & Søreide, T. (2000). Research on Corruption A Policy Oriented Survey.
- Aoki, M. (1984). *The Co-Operative Game Theory of the Firm*. Clarendon Press.
- Axelrod, R. (2006). *The Evolution of Cooperation: Revised Edition*. New York.
- Babbie, E. (2012). *The Practice of Social Research*. Cengage Learning.
- Bajaj, D., Oluwoye, J., & Lenard, D. (1997). An Analysis of Contractors' Approaches to Risk Identification in New South Wales, Australia. *Construction Management and Economics*, 15(4), 363–369.
- Baker, S., Ponniah, D., & Smith, S. (1999). Risk Response Techniques Employed Currently for Major Projects. *Construction Management and Economics*, 17(2), 205–213.
- Bardhan, P. K., & Mookherjee, D. (2006). Corruption and Decentralization of Infrastructure Delivery in Developing Countries. In S. Rose-Ackerman (Ed.), *International Handbook on the Economics of Corruption* (pp. 161–188). Cheltenham: Edward Elgar.
- Barrat, D., & Cole, T. (1991). *Sociology Projects: A Students' Guide*. Routledge.
- Ba, S., & Pavlou, P. A. (2002). Evidence of the Effect of Trust Building Technology in Electronic Markets: Price Premiums and Buyer Behavior. *MIS Quarterly*, 26(3), 243–268.
- Becker, G. S. (1968). Crime and Punishment: An Economic Approach. *Journal of Political Economy*, 76.
- Becker, G. S., & Stigler, G. J. (1974). Law Enforcement, Malfeasance, and Compensation of Enforcers. *The University of Chicago Law School*, 3(1), 1–18.
- Becker, S., & Bryman, A. (2004). *Understanding Research for Social Policy and Practice: Themes, Methods and Approaches*. Bristol: The Policy Press and Social Association.

- Beiske, B. (2007). *Research Methods. Uses and Limitations of Questionnaires, Interviews, and Case Studies*. München: GRIN Verlag GmbH.
- Bell, J. (2005). *Doing Your Research Project: A Guide for First-Time Researchers in Education, Health and Social Science* (4th edition.). Maidenhead, Berkshire, England: Open University Press.
- Bergen, M., Dutta, S., & Orville C. Walker, J. (1992). Agency Relationships in Marketing: A Review of the Implications and Applications of Agency and Related. *Journal of Marketing*, 56(3), 1–24.
- Berkowitz, L., & Donnerstein, E. (1982). External validity is More Than Skin Deep: Some Answers to Criticisms of Laboratory Experiments. *American Psychologist*, 37, 245–257.
- Bernard, H. R. (2011). *Research Methods in Anthropology: Qualitative and Quantitative Approaches*. Rowman Altamira.
- Besley, T. (2007). *Principled Agents?*. Oxford University Press.
- Blackburn, K., Bose, N., & Haque, M. E. (2004). *Endogenous Corruption in Economic Development*. Rochester, NY: Social Science Research Network.
- Blaxter, L., Hughes, C., & Tight, M. (2010). *How to Research* (4th edition.). Maidenhead: Open University Press.
- Boehm, F., & Olaya, J. (2006). Corruption in Public Contracting Auctions: The Role of Transparency in Bidding Processes. *Annals of Public and Cooperative Economics*, 77(4), 431–452.
- Boehm, F., Olaya, J., & Polanco, J. (2005). Privatization and Corruption. In E. U. von Weizsäcker, O. Young, & M. Finger (Eds.), *Limits to Privatization: How to Avoid Too Much of a Good Thing*. Earthscan, London.
- Bradach, J. L., & Eccles, R. G. (1989). Price, Authority, and Trust: From Ideal Types to Plural Forms. *Annual Review of Sociology*, 15(1), 97–118.

- Bray, J. (2005). The Use of Intermediaries and Other Alternatives to Bribery. In J. G. Lambsdorff, M. Taube, & M. Schramm (Eds.), *The New Institutional Economics of Corruption*. London: Routledge.
- Brenck, A., Beckers, T., Heinrich, M., & von Hirschhausen, C. (2005). *Public-Private Partnerships in New EU Member Countries of Central and Eastern Europe: An Economic Analysis with Case Studies from the Highway Sector*. European Investment Bank, Economics Department.
- Bryman, A. (2006). Integrating quantitative and qualitative research: how is it done? *Qualitative Research*, 6(1), 97–113.
- Bueb, J., & Ehlermann-Cache, N. (2005). Inventory of Mechanisms to Disguise Corruption in the Bidding Process and Some Tools for Prevention and Detection. In *Fighting Corruption and Promoting Integrity in Public Procurement* (pp. 161–174). Paris: OECD.
- Burger, P., & Hawkesworth, I. (2011). How To Attain Value for Money: Comparing PPP and Traditional Infrastructure Public Procurement. *OECD Journal on Budgeting*, 11(1), 91–146.
- Burguet, R., & Che, Y. (2004). Competitive Procurement with Corruption. *The RAND Journal of Economics*, 50–68.
- Bush, T. (2007). Authenticity in Research – Reliability, Validity and Triangulation. In A. Briggs & M. Coleman (Eds.), *Research Methods in Educational Leadership and Management* (Second Edition., pp. 91–105). Los Angeles: Sage Publications Ltd.
- Butterworth, J., & de la Harpe, J. (2009). Grand Designs: Corruption Risks in Major Water Infrastructure Projects.
- Butterworth, J., & Harpe, de la. (2009). *Not So Petty: Corruption Risks in Payment and Licensing Systems for Water* (No. 26). Chr. Michelsen Institute.

- Cabelkova, I. (2001). *Perceptions of Corruption in Ukraine: Are they Correct?*. Rochester, NY.
- Cannon, J. P., & Jr., W. D. P. (1999). Buyer-Seller Relationships in Business Markets. *Journal of Marketing Research*, 36(4), 439–460.
- Carr, L. T. (1994). The Strengths and Weaknesses of Quantitative and Qualitative Research: What Method for Nursing? *Journal of Advanced Nursing*, 20(4), 716–721.
- Castalia. (2009). Understanding, Measuring, and Stopping Corruption in Construction A Foundation Paper and Case Studies. Castalia Advisory Group.
- Cavill, S., & Sohail, M. (2007a). Accountability Arrangements to Combat Corruption. *WEDC, Loughborough University Leicestershire*.
- Cavill, S., & Sohail, M. (2007b). *Combat Corruption in Infrastructure Services: A Toolkit*. WEDC, Loughborough University.
- Celentani, M., & Ganuza, J.-J. (2002). Corruption and Competition in Procurement. *European Economic Review*, 46(7), 1273–1303.
- Chan, A., Ho, D., & Tam, C. (2001). Design and Build Project Success Factors: Multivariate Analysis. *Journal of Construction Engineering and Management*, 127(2), 93–100.
- Chang, E. C. C. (2013). A Comparative Analysis of How Corruption Erodes Institutional Trust. *Taiwan Journal of Democracy*, 9(1), 73–92.
- Chang, E. C. C., & Chu, Y. (2006). Corruption and Trust: Exceptionalism in Asian Democracies? *The Journal of Politics*, 68(02), 259–271.
- Chen, X. (2013). *Trust in Authority, Perception of Fairness and Cooperative Behavior of Audited Entities: In the Context of Government Audit*. Rochester, NY.

- Cheung, E. (2009, March). *Developing a Best Practice Framework for implementing Public Private Partnerships (PPP) in Hong Kong*. Queensland University of Technology, Australia.
- Chrystal, K. A., & Lipsey, R. G. (1997). *Economics for Business and Management*. Oxford University Press.
- Clarke, A., & Dawson, R. (1999). *Evaluation Research: An Introduction to Principles, Methods and Practice*. SAGE, Publications, London.
- Cobarzan, B., & Hamlin, R. E. (2005). Corruption and Ethical Issues Regarding Public-Private Partnership. *Revista Transilvanua de Stiinta Administrative*, 3(15), 28–37.
- Cohen, J. (1969). *Statistical power analysis for the behavioral sciences*. Academic Press.
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research Methods in Education* (6 edition.). London ; New York: Routledge.
- Compte, O., Lambert-Mogiliansky, A., & Verdier, T. (2005). Corruption and Competition in Procurement Auctions. *The RAND Journal of Economics*, 36(1), 1–15.
- Courtright, J. A. (1996). Standpoint: Rationally Thinking about Nonprobability. *Journal of Broadcasting & Electronic Media*, 40(3), 414–421.
- CPDI. (2009). Using Right to Information Legislation for Investigative Reporting. Centre for Peace and Development Initiatives, Pakistan.
- CPDI. (2011). Transparency and Accountability in Public Procurement Regime. Pakitsan.
- Creswell, J. W., & Clark, V. L. P. (2011). *Designing and Conducting Mixed Methods Research*. SAGE.

- Croix, D. la, David, & Delavallade, C. (2006). *Growth, Public Investment and Corruption with Failing Institutions*. Rochester, NY.
- Cronbach, L. (1951). Coefficient Alpha and the Internal Structure of Tests. *Psychometrika*, 16(3), 297–334.
- Crossan, F. (2003). Research philosophy: towards an understanding. *Nurse Researcher*, 11(1), 46–55.
- Dane, F. c. (1990). *Research Methods*. Brooks Cole, London.
- Das, S. C. (2011). *Project Management and Control*. PHI Learning Pvt. Ltd.
- Davis, J. (2004). Corruption in Public Service Delivery: Experience from South Asia's Water and Sanitation Sector. *World Development*, 32(1), 53–71.
- De Jong, M., Henry, W. P., & Stansbury, N. (2009). Eliminating Corruption in Our Engineering/Construction Industry. *Leadership & Management in Engineering*, 9(3), 105–111.
- Della Porta, D. (2000). Social Capital, Beliefs in Government, and Political Corruption. In S. Pharr & R. Putnam (Eds.), *Disaffected Democracies. What's Troubling the Trilateral Countries ?* (Princeton University Press., pp. 202–229). Princeton.
- Della Porta, D., Rose-Ackerman, S., Universität Bielefeld, & Zentrum für Interdisziplinäre Forschung (Eds.). (2002). *Corrupt Exchanges: Empirical Themes in the Politics and Political Economy of Corruption*. Baden-Baden: Nomos.
- Della Porta, D., & Vannucci, A. (2001). Corrupt Exchanges: Empirical Themes in the Politics and Political Economy of Corruption. Presented at the Conference, Bielefeld.
- Denzin, N. K. (1970). *The research act: a theoretical introduction to sociological methods*. Chicago: Aldine.

- Diekhoff, G. M. (1992). *Statistics for the Social and Behavioral Science: Univariate, Bivariate, and Multivariate*. Dubuque, IA: William C Brown.
- Doig, A., & Riley, S. (1998). Corruption and Anti-Corruption Strategies: Issues and Case Studies from Developing Countries. *Corruption and Integrity Improvement Initiatives in Developing Countries*, 45, 62.
- Doig, A., & Theobald, R. (2000). *Corruption and Democratisation*. Psychology Press.
- Durrani, A. Z., Mir, A. H., & Tanvir, M. (2007). Development of Construction Industry : A Literature Review- PIICA. *World Bank*.
- Dyer, J. (2002). Effective Interfirm Collaboration: How Firms Minimize Transaction Costs and Maximize Transaction Value.
- Easterby-Smith, M., Thorpe, R., & Lowe, A. (2002). *Management Research: An Introduction* (2nd edition.). London; Thousand Oaks: SAGE Publications Ltd.
- Edelenbos, J., & Klijn, E.-H. (2007). Trust in Complex Decision-Making Networks A Theoretical and Empirical Exploration. *Administration & Society*, 39(1), 25–50.
- Ehrhardt, D., Oliver, C., & Kenny, C. (2009). Deterring Corruption and Improving Governance in Road Construction and Maintenance.
- Faguet, J. P. (2009). Governance from Below in Bolivia: A Theory of Local Government with Two Empirical Tests. *Center for Latin American Studies*.
- Farooqui, U. R., & Ahmed. (2008). Assessing Impacts of Low-Bid Environment on Performance of Public Work Projects: A Case Study of Pakistan. In *Construction in Developing Countries: Procurement, Ethics and Technology*. Trinidad & Tobago, W.I.: Rotterdam (Netherlands).
- Fellows, R. F., & Liu, A. (2003). *Research Methods for Construction*. Wiley.
- Fellows, R. F., & Liu, A. M. M. (2008). *Research Methods for Construction* (3rd Edition edition.). Oxford: Wiley-Blackwell.

- Ferber, R. (1977). Research by Convenience. *Journal of Consumer Research*, 4(1), 57–58.
- Flyvbjerg, B., Holm, M. S., & Buhl, S. (2002). Underestimating Costs in Public Works Projects Error or Lie?, 68(3).
- Gahlot, P. S. (2007). *Construction Planning And Management*. New Age International.
- Galtung, F. (1998). Criteria for Sustainable Corruption Control. *European Journal of Development Research*, 10(1), 105–128.
- George, D., & Mallery, P. (2003). *SPSS for Windows Step by Step: A Simple Guide and Reference, 11.0 update*. Allyn and Bacon.
- Gerring, J. (1999). What Makes a Concept Good? A Criterial Framework for Understanding Concept Formation in the Social Sciences. *Polity*, 31(3), 357–393.
- Gill, J., & Johnson, P. (2010). *Research Methods for Managers*. SAGE Publications Ltd.
- Goddard, W., & Melville, S. (2004). *Research Methodology: An Introduction*. Juta and Company Ltd.
- GoP. (2009a). *Pakistan - Public Expenditure and Financial Accountability Assessment of Federal Government* (World Bank Other Operational Studies No. 2862). Government of Pakistan and Other Development Partners.
- GoP. (2009b, June). *Pakistan - Federal Procurement Baseline Indicator Systems Assessment*. Government of Pakistan and Development Partners.
- GoP/NAB. (2002). *Pak National Anti-Corruption Strategy*. National Anti-Corruption Bureau, Government of Pakistan.
- GoP/PC. (2011a). *Analysis/Review of PSDP “Public Sector Development Program (PSDP).”* Planning Commission, Government of Pakistan.
- GoP/PC. (2011b). *Analytical Review of PSDP Portfolio “Public Sector Development Program (PSDP).”* Planning Commission, Government of Pakistan.

- Gould, D. J. (1991). Administrative Corruption: Incidence, Causes, and Remedial Strategies. In A. Farazmand (Ed.), *Handbook of Comparative and Development Public Administration* (pp. 467–480). New York: Marcel Dekker, Inc.
- Gould, D. J., & Amaro-Reyes, J. A. (1983). *The Effects of Corruption on Administrative Performance : Illustrations from Development Countries* (pp. 1–48). The World Bank.
- Graham, J. R., & Lilly, R. S. (1984). *Psychological Testing*. Prentice-Hall.
- Guasch, J. L., Laffont, J.-J., & Straub, S. (2007). Concessions of Infrastructure in Latin America: Government-Led Renegotiation. *Journal of Applied Econometrics*, 22(7), 1267–1294.
- Gulati, P. M. (2009). *Research Management: Fundamental & Applied Research* (First edition.). Global India Publications Pvt Ltd.
- Hakim, C. (1987). *Research Design: Strategies and Choices in the Design of Social Research*. London, UK: Allen and Unwin.
- Hammami, M., Ruhashyankiko, J. F., & Yehoue, E. B. (2006). *Determinants of Public-Private Partnerships in Infrastructure*. International Monetary Fund.
- Hartley, R. (2009). Fighting Corruption in the Australian Construction Industry: The National Code of Practice. *Leadership & Management in Engineering*, 9(3), 131–135.
- Hawkins, J. (2013). *How to Note: Reducing Corruption in Infrastructure Sectors*. Climate and Environment Infrastructure Livelihood.
- Heide, J. B., & John, G. (1990). Alliances in Industrial Purchasing: The Determinants of Joint Action in Buyer-Supplier Relationships. *Journal of Marketing Research*, 27(1), 24–36.
- Henry, W. P. (2009). Addressing Corruption in Our Engineering/Construction Industry. *Leadership & Management in Engineering*, 9(3), 101–102.

- Houde, S. C. (2002). Methodological Issues in Male Caregiver Research: An Integrative Review of the Literature. *Journal of Advanced Nursing*, 40(6), 626–640.
- Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277–1288.
- Hussain, A. A., Mir, A. H., Durrani, A. Z., & Zaidi, H. A. (2007). Business Environment and Cost of Doing Business (PIICA). World Bank.
- Hussey, J., & Hussey, R. (1997). *Business Research: A Practical Guide for Undergraduate and Postgraduate Students*. Macmillan Publishers Limited.
- Ivanov, K. (2007). The Limits of a Global Campaign against Corruption. In S. Bracking (Ed.), *Corruption and development: the anti-corruption campaigns*. Basingstoke Hampshire, UK: Palgrave Macmillan.
- Jain, A. K. (1998). *Economics of Corruption*. Springer.
- Jain, A. K. (2001). Corruption: A Review, 15(1), 71–121.
- Johnston, M. (2005). *Syndromes of Corruption: Wealth, Power, and Democracy*. Cambridge, UK ; New York: Cambridge University Press.
- Jourdain, R., & Balgobin, N. (2003). Analyzing the Public Procurement Process to Identify and Eliminate Risks of Corruption,. In *Controlling Corruption in Asia and the Pacific* (pp. 105–16). Kuala Lumpur, Malaysia: Organisation for Economic Co-operation and Development, Asian Development Bank.
- Kardes, F. R. (1996). In Defense of Experimental Consumer Psychology. *Journal of Consumer Psychology*, 5(3), 279–296.
- Kaufmann, D., Léautier, F., & Mastruzzi, M. (2005). *Governance and the City: An Empirical Exploration Into Global Determinants of Urban Performance*. World Bank Publications.
- Kenny, C. (2006). *Measuring and Reducing the Impact of Corruption in Infrastructure*. World Bank Publications.

- Kenny, C. (2007). Construction, Corruption, and Developing Countries.
- Kenny, C. (2009a). Measuring Corruption in Infrastructure: Evidence from Transition and Developing Countries. *The Journal of Development Studies*, 45(3), 314–332.
- Kenny, C. (2009b). Transport Construction, Corruption and Developing Countries. *Transport Reviews*, 29(1), 21–41.
- Kenny, C. (2010). Publishing Construction Contracts and Outcome Details. *The World Bank*.
- Khan, F. (2007). Corruption and the Decline of the State in Pakistan. *Asian Journal of Political Science*, 15(2), 219–247.
- Kirk, R. E. (1995). *Experimental Design: Procedures for the Behavioral Sciences* (3rd ed.). Pacific Grove, CA: Brooks/Cole.
- Klitgaard, R. (1988). *Controlling Corruption*. University of California Press.
- Klitgaard, R. (2012). Public-Private Collaboration and Corruption. In M. Pieth (Ed.), *Collective Action on Anti-Corruption*. Basel: Basel Institute on Governance.
- Kululanga, G. K., Kuotcha, W., McCaffer, R., & Edum-Fotwe, F. (2001). Construction Contractors' Claim Process Framework. *Journal of Construction Engineering and Management*, 127(4), 309–314.
- Kumar, N. (1996). The Power of Trust in Manufacturer-Retailer Relationships. *Harvard Business Review*.
- Kurer, O. (2005). Corruption: An Alternative Approach to Its Definition and Measurement. *Political Studies*, 53(1), 222–239.
- Lam, K. C., & Chow, W. S. (1999). The Significance of Financial Risks in BOT Procurement. *Building Research & Information*, 27(2), 84–95.
- Lane, C. (1998). Introduction: Theories and Issues in the Study of Trust. In C. Lane & R. Bachmann (Eds.), *Trust within and between Organizations: Conceptual*

- Issues and Empirical Applications* (Revised edition., pp. 1–30). Oxford; New York: Oxford University Press.
- Langseth, P., Stapenhurst, R., & Pope, J. (1999). National Integrity Systems. In R. Stapenhurst & S. J. Kpundeh (Eds.), *Curbing Corruption: Toward a Model for Building National Integrity*. The World Bank Washington, D.C.
- Lawson, L. (2009). The Politics of Anti-Corruption Reform in Africa. *The Journal of Modern African Studies*, 47(01), 73–100.
- Leiner, D. J. (2014). Convenience Samples from Online Respondent Pools: A case study of the SoSci Panel.
- Li, B. (2003, May). *Risk Management of Construction Public Private Partnership Projects*. School of the Built and Natural Environment, Glasgow Caledonian University.
- Likert, R. (1931). *A technique for the measurement of attitudes*. *Archives of Psychology*. New York: Columbia University Press.
- Lix, L. M., Keselman, J. C., & Keselman, H. J. (1996). Consequences of Assumption Violations Revisited: A Quantitative Review of Alternatives to the One-Way Analysis of Variance “F” Test. *Review of Educational Research*, 66(4), 579–619.
- Lucas, J. W. (2003). Theory-Testing, Generalization, and the Problem of External Validity. *Sociological Theory*, 21(3), 236–253.
- Macneil, I. R. (1980). *The New Social Contract*. Yale University Press, New Haven, CT.
- Martimort, D., & Pouyet, J. (2008). To build or not to build: Normative and positive theories of public–private partnerships. *International Journal of Industrial Organization*, 26(2), 393–411.
- Mauro, P. (1995). Corruption and Growth. *The Quarterly Journal of Economics*, 110(3), 681–712.

- Maxwell, S. E., & Delaney, H. D. (2004a). *Designing Experiments and Analyzing Data: A Model Comparison Perspective*. Psychology Press.
- Maxwell, S. E., & Delaney, H. D. (2004b). *Designing Experiments and Analyzing Data: A Model Comparison Perspective*. Psychology Press.
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An Integrative Model Of Organizational Trust. *Academy of Management Review*, 20(3), 709–734.
- McKnight, D. H., & Chervany, N. L. (2001). What Trust Means in E-Commerce Customer Relationships: An Interdisciplinary Conceptual Typology. *International Journal of Electronic Commerce*, 6(2), 35–59.
- McKnight, D. H., Cummings, L. L., & Chervany, N. L. (1998). Initial Trust Formation in New Organizational Relationships. *The Academy of Management Review*, 23(3), 473–490.
- Melgar, N., Piani, G., & Rossi, M. (2009). *Are there Differences Between Perception of Corruption at Public and Private Sector? A Multi-Country Analysis*. Working Paper.
- Mikhailitchenko, A., Javalgi, R. (Raj) G., Mikhailitchenko, G., & Laroche, M. (2009). Cross-Cultural Advertising Communication: Visual Imagery, Brand Familiarity, and Brand Recall. *Journal of Business Research*, 62(10), 931–938.
- Miller, S., Roberts, P., & Spence, E. (2005). *Corruption and Anti-Corruption: an Applied Philosophical Approach*. Pearson Prentice Hall.
- Minow, M. (2003). Public and Private Partnerships: Accounting for the New Religion. *116 Harvard Law Review* 1229 (2002-2003).
- Mir, A. H., & Durrani, A. Z. (2007, November). Pakistan Infrastructure Implementation Capacity Assessment (PIICA). World Bank.
- Mishra, D. P., Heide, J. B., & Cort, S. G. (1998). Information Asymmetry and Levels of Agency Relationships. *Journal of Marketing Research*, 35(3), 277–295.

- Moody-Stuart, G. (1997a). *Grand corruption: how business bribes damage developing countries*. WorldView Publishing, UK.
- Moody-Stuart, G. (1997b). *Grand Corruption: How Business Bribes Damage Developing Countries*. WorldView Publishing, UK.
- Morgan, R. M., & Hunt, S. D. (1994). The Commitment-Trust Theory of Relationship Marketing. *Journal of Marketing*, 58(3), 20–38.
- Mungiu-Pippidi, A. (2006). *Corruption: Diagnosis and Treatment* (Paper No. ID 1557727). Rochester, NY: Social Science Research Network.
- Myerson, R. B. (1993). Effectiveness of Electoral Systems for Reducing Government Corruption: A Game-Theoretic Analysis. *Games and Economic Behavior*, 5(1), 118–132.
- Nachmias, C. F., & Nachmias, D. (1996). *Research Methods in the Social Sciences*. St. Martin's Press.
- Nicholas, J. M., & Steyn, H. (2008). *Project Management for Business, Engineering, and Technology: Principles and Practice*. Elsevier.
- Nordin, R. M., Takim, R., & Nawawi, A. H. (2012). Transparency Initiatives (TI) in Construction: The Social Psychology of Human Behaviours. *Procedia - Social and Behavioral Sciences*, 50, 350–360.
- Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.) New York: McGraw-Hill.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory*. New York: McGraw-Hill.
- OECD. (2005). *Fighting Corruption and Promoting Integrity in Public Procurement*. Paris: Organisation for Economic Co-operation and Development.
- OECD. (2007a). *Bribery in Public Procurement: Methods, Actors and Counter-Measures*. Organization for Economic Co-Operation and Development.

-
- OECD. (2007b). *Integrity in Public Procurement: Good Practice from A to Z* (No. ID 987026). Rochester, NY: Social Science Research Network.
- OECD. (2008). *Public-Private Partnerships: In Pursuit of Risk Sharing and Value for Money*. Paris.: OECD Publishing.
- Offe, C. (1999). How Can We Trust Our Fellow Citizens? In M. E. Warren (Ed.), *Democracy and Trust* (pp. 42–87). Cambridge University Press.
- Olken, B. (2007). Monitoring Corruption: Evidence from a Field Experiment in Indonesia. *Journal of Political Economy, The University of Chicago*, 115(2).
- Pasha, H., Imran, M., Iqbal, A., Ismail, Z., Sheikh, R., & Shirani, S. (2012). Review and Analysis of Pakistan's Public Investment Program: Phase-I Report on Macro-Fiscal and Development Framework. International Growth Centre.
- Pavlou, P. A. (2002). Institution-Based Trust in Interorganizational Exchange Relationships: the Role of Online B2B Marketplaces on Trust Formation. *The Journal of Strategic Information Systems*, 11(3-4), 215–243.
- Pavlou, P. A., & Gefen, D. (2002). Building Effective Online Marketplaces with Institution-Based Trust. In *ICIS 2002 Proceedings*. Association for Information Systems AIS Electronic Library.
- Pavlou, P., & Ba, S. (2000). Does Online Reputation Matter? An Empirical Investigation of Reputation and Trust in Online Auction Markets. In *Proceedings of the 6th Americas Conference in Information Systems*,. Long Beach, CA,.
- Persson, A., Rothstein, B., & Teorell, J. (2010). *The Failure of Anti-Corruption Policies A Theoretical Mischaracterization of the Problem* (QoG Working Paper Series 2010 No. 19). The Quality of Government Institute, University of Gothenburg.
- Persson, A., Rothstein, B., & Teorell, J. (2013). Why Anticorruption Reforms Fail—Systemic Corruption as a Collective Action Problem. *Governance*, 26(3), 449–471.

- Persson, T., & Tabellini, G. E. (2002). *Political Economics: Explaining Economic Policy*. MIT Press.
- Peterson, R. A. (2001). On the Use of College Students in Social Science Research: Insights from a Second-Order Meta-analysis. *Journal of Consumer Research*, 28(3), 450–461.
- Pope, J. (2000). *The TI Source Book* (2nd ed.). Transparency International, Berlin.
- Popper, K. (2002). *Conjectures and Refutations: The Growth of Scientific Knowledge* (2nd edition.). London ; New York: Routledge.
- Potter, W. J., Cooper, R., & Dupagne, M. (1993). The Three Paradigms of Mass Media Research In Mainstream Communication Journals. *Communication Theory*, 3(4), 317–335.
- Quah, J. S. T. (1999). Comparing Anti-corruption Measures in Asian Countries: Lessons to be Learnt, *II*(2).
- Ribbins, P. (2007). Interviews in Educational Research: Conversations with a Purpose. In A. R. J. Briggs & M. Coleman (Eds.), *Research Methods in Educational Leadership and Management* (2nd ed., pp. 207– 223). Los Angeles: SAGE.
- Robson, C. (2011). *Real World Research 3e* (3rd Edition edition.). Chichester, West Sussex: John Wiley & Sons.
- Rose-Ackerman, S. (1978). *Corruption: A Study in Political Economy*. Academic Press.
- Rose-Ackerman, S. (1999). *Corruption and Government: Causes, Consequences, and Reform*. New York: Cambridge University Press.
- Rose-Ackerman, S., & Truex, R. (2012a). *Corruption and Policy Reform* (SSRN Scholarly Paper No. ID 2007152). Rochester, NY.
- Rose-Ackerman, S., & Truex, R. (2012b). *Corruption and Policy Reform*. Working Paper Prepared for the Copenhagen Consensus Project.

- Rothstein, B., & Teorell, J. (2008). What Is Quality of Government? A Theory of Impartial Government Institutions. *Governance*, 21(2), 165–190.
- Rus, A., & Iglic, H. (2005). Trust, Governance and Performance The Role of Institutional and Interpersonal Trust in SME Development. *International Sociology*, 20(3), 371–391.
- Sako, M., & Helper, S. (1998). Determinants of Trust in Supplier Relations: Evidence from the Automotive Industry in Japan and the United States. *Journal of Economic Behavior & Organization*, 34(3), 387–417.
- Saunders, M., Thornhill, A., & Lewis, P. (2009). *Research Methods for Business Students* (5th edition.). New York: Pearson Education.
- Sawilowsky, S. S., & Clifford, R. (1992). A more realistic look at the robustness and Type II error properties of the t test to departures from population normality. *Psychological Bulletin*, 111(2), 352–360.
- Schutt, R. K. (2006). *Investigating the Social World: The Process and Practice of Research*. SAGE Publications, Inc.
- Seligson, M. A. (2002). The Impact of Corruption on Regime Legitimacy: A Comparative Study of Four Latin American Countries. *Journal of Politics*, 64(2), 408–433.
- Shah, A., Khan, S., Khan, R., & Jan, I. (2010). Public Procurements Rules and Low Bidder Dilemma in Pakistan, 2(6).
- Sherry, B., Jefferds, M. E., & Grummer-Strawn, L. M. (2007). Accuracy of Adolescent Self-Report of Height and Weight in Assessing Overweight Status: a Literature Review. *Archives of Pediatrics & Adolescent Medicine*, 161(12), 1154–1161.
- Shihata, I. F. I. (1997). Corruption: A General Review with an Emphasis on the Role of the World Bank. *Journal of Financial Crime*, 5(1), 12–29.

- Shih, M.-C. (2010). Trust and Transparency In Network Governance: The Implication Of Taiwan's Anticorruption Activities, *II*(2).
- Shleifer, A., & Vishny, R. W. (1993). Corruption. *The Quarterly Journal of Economics*, *108*(3), 599–617.
- Shneiderman, B. (2000). Designing Trust into Online Experiences. *Commun. ACM*, *43*(12), 57–59.
- Silverman, D. (2004). *Doing Qualitative Research: A Practical Handbook* (Second Edition edition.). London; Thousand Oaks, Calif.: SAGE.
- Simonson, I., Carmon, Z., Dhar, R., Drolet, A., & Nowlis, S. M. (2001). Consumer Research: In Search of Identity. *Annual Review of Psychology*, *52*(1), 249–275.
- Søreide, T. (2002). *Corruption in Public Procurement. Causes, Consequences and Cures*. Chr. Michelsen Institute Development Studies and Human Rights.
- Søreide, T. (2004). Corruption in International Business Transactions: The Perspective Of Norwegian Firms. *CMI Report, R 2004: 10*.
- Sparbel, K. J., & Anderson, M. A. (2000). A Continuity of Care Integrated Literature Review, Part 2: Methodological Issues. *Journal of Nursing Scholarship: An Official Publication of Sigma Theta Tau International Honor Society of Nursing / Sigma Theta Tau*, *32*(2), 131–135.
- Stansbury, N. (2005). Exposing the Foundations of Corruption in Construction in Global Corruption Report 2005; Special Focus: On Corruption in Construction and Post-Conflict Reconstruction.
- Steets, J. (2001a). *Argentina: Transparent Contracting*. Transparency International.
- Steets, J. (2001b). *Serbia: Budgeting and Public Procurement*. Transparency International.

- Strizhakova, Y., Coulter, R. A., & Price, L. L. (2008). The Meanings of Branded Products: A Cross-National Scale Development and Meaning Assessment. *International Journal of Research in Marketing*, 25(2), 82–93.
- Svensson, J. (2005). Eight Questions about Corruption. *The Journal of Economic Perspectives*, 19(3), 19–42.
- Tabish, S. Z. S., & Jha, K. N. (2012). The Impact of Anti-Corruption Strategies on Corruption Free Performance in Public Construction Projects. *Construction Management & Economics*, 30(1), 21–35.
- Tahir, P. (2005). Institutional Machinery for Managing the Pakistan Economy. *Lahore Journal of Economics*, 10(Special Edition), 106–143.
- Tanzi, V. (1998). Corruption Around the World Causes, Consequences, Scope, and Cures, 45(4).
- Tanzi, V., & Davoodi, H. (1997a). Corruption, Public Investment and Growth. IMF Working Paper, Washington DC.
- Tanzi, V., & Davoodi, H. (1997b). Corruption, Public Investment and Growth. IMF Working Paper, Washington DC.
- Tanzi, V., & Davoodi, H. (1998). Roads to Nowhere: How Corruption in Public Investment Hurts Growth. *IMF Economics Issue No. 12*.
- Taylor, B., Kermode, S., & Roberts, K. (2006). Research in Nursing And Health Care: Evidence for Practice. *School of Health and Human Sciences*.
- Teorell, J. (2007). Corruption as an Institution: Rethinking the Nature and Origins of the Grabbing Hand. *Gothenburg: The Quality of Government Institute, University of Gothenburg., Working Paper 2007: 5*.
- Transparency International. (2005). Global Corruption Report.
- Transparency International. (2006). Preventing Corruption on Construction Projects.
- Transparency International. (2010). Corruption and Public Procurement.

- Transparency International, Pakistan. (2010). Ensuring Transparency and Public Participation in Public Procurement in Pakistan. Transparency International, Pakistan.
- UNDP. (1999). *Fighting Corruption to Improve Governance*. United Nations Development Programme.
- UNDP. (2008). Corruption and Development: Anti-Corruption Interventions for Poverty Reduction, Realization of the MDGs and Promoting Sustainable Development. United Nations Development Programme.
- Uslaner, E. (2009). Corruption and the Inequality Trap. Presented at the Prepared for the Conference on Institutions, Behavior, and the Escape from Persistent Poverty, Cornell University, Ithaca, NY.
- Uslaner, E. M. (2004). Trust and Corruption. In J. G. Lambsdorf, M. Taube, & M. Schramm (Eds.), *Corruption and the New Institutional Economics*. London: Routledge: Routledge.
- Vittal, S. N. (2002). Problem Areas of Corruption in Construction. Preventive Vigilance Publication.
- Walliman, N. (2005). *Your Research Project: A Step-by-step Guide for the First-time Researcher* (2nd ed.). California: Sage Publications.
- Wang, S. Q., Tiong, R. L. ., Ting, S. ., & Ashley, D. (1999). Risk Management Framework for BOT Power Projects in China. *The Journal of Structured Finance*, 4(4), 56–67.
- Wang, S., Tiong, R., Ting, S., & Ashley, D. (2000). Evaluation and Management of Political Risks in China's BOT Projects. *Journal of Construction Engineering and Management*, 126(3), 242–250.

- Wellington, J. (2000). *Educational Research: Contemporary Issues and Practical Approaches*. London; New York: Continuum International Publishing Group Ltd.
- Werlin, H. H. (1973). The Consequences of Corruption: The Ghanaian Experience. *Political Science Quarterly*, 88(1), 71–85.
- Williams, R. (1999). New Concepts for Old? *Third World Quarterly*, 20(3), 503–513.
- Wilson, J. (2010). *Essentials of Business Research: A Guide to Doing Your Research Project*. SAGE.
- World Bank. (2000). *Anticorruption in Transition: A Contribution to the Policy Debate*. Washington, D.C.: World Bank Publications.
- World Bank. (2013). Corruption and PPPs Challenges and Solutions. The World Bank Group, Integrity Vice Presidency.
- Wren-Lewis, L. (2012). Do Infrastructure Reforms Reduce the Effect Of Corruption? Theory and Evidence from Latin America and the Caribbean.
- Yeung, F. Y. (2007). *Developing a Partnering Performance Index (PPI) for Construction Projects – A Fuzzy Set Theory Approach*. The Hong Kong Polytechnic University, Hong Kong.
- Yin, R. K. (2003). *Case Study Research: Design and Methods*. SAGE Publications.
- Zhou, I. M. (1998). China: The Strategy of Prevention against Organized Corruption. *Journal of Financial Crime – International*, 5(3), 1–5.
- Zou, P. X. (2006). Strategies for Minimizing Corruption in the Construction Industry in China. *Journal of Construction in Developing Countries*, 11(2), 15–29.
- Zucker, L. G. (1986). Institutional Theories of Organization. *Annual Review of Sociology*, 13(1), 443–464.

Appendix A

Dear Sir,

At University of Manchester we are currently undertaking a research **into Corruption in infrastructure Procurement - A Study Based on Procurement of Infrastructure Projects in Pakistan**. I appreciate that your expert opinion can contribute to this project therefore I am writing to request your participation in phase I - pilot survey for this research.

We have produced the attached questionnaire to capture the most frequent potential corrupt practices likely to occur during traditional and PPP infrastructure procurement process in Pakistan. The questionnaire is designed in a way that it should not take you more than 30 minutes to complete. The outcomes of the research will be solely academic and the participant will remain anonymous in any analysis and reporting of the research. This will also be ensured that any information you provide would be treated as strictly confidential.

Please complete the questionnaire survey using the link provided in the email or through attached file.

We are sorry for the inconvenience this may cause you. Your support is strongly appreciated and would be crucial to this research.

If you need any further information on the project, please do not hesitate to contact us on aqsa.shabbir@postgrad.manchester.ac.uk

Stage of the Procurement Process		Please rate the following corrupt practice for their likelihood of occurrence during traditional and PPP infrastructure procurement processes in Pakistan. (1= Almost Never; 2= Occasionally; 3= Sometimes; 4= Frequently; 5= Almost Always)	Traditional					PPP				
Procurement Planning/Pre-Bidding	Needs assessment, planning and budgeting	1- No formal procedures adopted for appraising and prioritising infrastructure projects which are instead identified and prioritized on the basis of vested interests of parties involved.	1	2	3	4	5	1	2	3	4	5
		2- Low estimation of costs to get projects with low returns approved thus introducing inaccurate policy requirements.	1	2	3	4	5	1	2	3	4	5
		3- High estimates of cost to provide an opportunity to divert funds.	1	2	3	4	5	1	2	3	4	5
		4- Procurements not aligned with the overall investment decision-making process in departments.	1	2	3	4	5	1	2	3	4	5
		5- Interference of high-level officials in the decision to procure thus conflicts of interest are left unmanaged.	1	2	3	4	5	1	2	3	4	5
		6- Unclear overlapping department roles and functions at headquarters and subnational levels causing confusion which forum to be used.	1	2	3	4	5	1	2	3	4	5
		7- Demand is induced so that a particular company can make a deal but the purchase is of little or no value to society resulting in unnecessary project.	1	2	3	4	5	1	2	3	4	5
		8- The investment is economically unjustified.	1	2	3	4	5	1	2	3	4	5
		9- The investment is environmentally damaging.	1	2	3	4	5	1	2	3	4	5
		10- Budget for a contract with a "certain" prearranged contractor or informal agreement on contract.	1	2	3	4	5	1	2	3	4	5

		11- Political influence to favour large capital projects such as highways and hydro-electric schemes over small-scale projects or maintenance schemes.	1	2	3	4	5	1	2	3	4	5
		12- Large discretionary funding providing discretionary decision-making opportunities.	1	2	3	4	5	1	2	3	4	5
		13- Lack of clarity of rules and regulations in procurement, quality control and financial control resulting in manipulations.	1	2	3	4	5	1	2	3	4	5
		14- Land use and price as agriculture, residential or commercial to favour the vested interests of parties involved.	1	2	3	4	5	1	2	3	4	5
	Definition of requirements	15- Approval of favourable environmental impact assessment/planning proposal.	1	2	3	4	5	1	2	3	4	5
		16- Social and environmental impact assessments that deliberately distort compensation for project-affected people.	1	2	3	4	5	1	2	3	4	5
		17- Inadequate or no site surveys exaggerating the risks to suit a design specification.	1	2	3	4	5	1	2	3	4	5
		18- Tailored technical specifications to suit a particular firm.	1	2	3	4	5	1	2	3	4	5
		19- Technical specifications too vague or not based on performance requirements.	1	2	3	4	5	1	2	3	4	5
		20- Inadequate or incomplete designs resulting in over-designed and overpriced projects.	1	2	3	4	5	1	2	3	4	5
		21- No strategy for operations and maintenance.	1	2	3	4	5	1	2	3	4	5
		22- Poor cost estimations for lateral benefits.	1	2	3	4	5	1	2	3	4	5
		23- Bidder selection and award criteria not defined clearly and objectively.	1	2	3	4	5	1	2	3	4	5
		24- Bidder selection and award criteria not established and announced in advance of the closing of the bid.	1	2	3	4	5	1	2	3	4	5
		25- Unqualified companies being licensed, for example through the provision of fraudulent tests or quality assurance certificates.	1	2	3	4	5	1	2	3	4	5
		26- Goods or services that are needed are overestimated to favour a particular provider.	1	2	3	4	5	1	2	3	4	5
		27- Hiring favourite consulting services for project feasibility study and preparation of specifications or bidding documents.	1	2	3	4	5	1	2	3	4	5
	Choice of procurement procedure	28- Lack of procurement strategy for the use of non-competitive procedures based on the value and complexity of the procurement resulting in inconsistent procurement practices.	1	2	3	4	5	1	2	3	4	5
		29- Lack of transparency and clarity in procurement procedures.	1	2	3	4	5	1	2	3	4	5
		30- Abuse of non-competitive procedures on the basis of legal exceptions through contract splitting on the basis of low monetary value contracts.	1	2	3	4	5	1	2	3	4	5
		31- Abuse of non-competitive procedures by certifying procurement process unnecessarily urgent OR accepting unsolicited bids leading to sub-optimal project design and construction.	1	2	3	4	5	1	2	3	4	5
		32- Abuse of non-competitive procedures on the basis of legal exceptions through Abuse of other exceptions based on a technicality or exclusive rights, etc.	1	2	3	4	5	1	2	3	4	5
		33- Abuse of non-competitive procedures on the basis of legal exceptions through untested continuation of existing contracts.	1	2	3	4	5	1	2	3	4	5
		34- Abuse of non-competitive procedures on the basis of legal exceptions through receiving an insufficient number of responsive bids by staging a deliberate failure of tender.	1	2	3	4	5	1	2	3	4	5

Tendering	Invitation to bid, bid preparation & bid opening	35- Information on the procurement opportunity not provided in a consistent manner.	1	2	3	4	5	1	2	3	4	5
		36- Absence of public notice for the invitation to bid.	1	2	3	4	5	1	2	3	4	5
		37- Rejection of potential winners or good bidders during pre-qualification for no or some artificial reason to favour particular bidder.	1	2	3	4	5	1	2	3	4	5
		38- Providing a time frame for bid submission that is not sufficient for ensuring a level playing field and is not consistently applied for all bidders, for example, confidential inside information is leaked earlier to help favourite bidder to prepare competitive bid.	1	2	3	4	5	1	2	3	4	5
		39- Bid rigging/illegal price fixing/collusive bidding/contractors' pooling to submit a bid higher than the market value.	1	2	3	4	5	1	2	3	4	5
		40- Bids may not be publicly opened, or their content may be subject to manipulation.	1	2	3	4	5	1	2	3	4	5
		41- Additional fictitious bidders or ones unlikely to submit competitive bids are selected to show competitive process.	1	2	3	4	5	1	2	3	4	5
		42- Setting bid evaluation criteria to fit only a particular bidder.	1	2	3	4	5	1	2	3	4	5
		43- Preparing tender documents in a way to favour private contractor/consortium.	1	2	3	4	5	1	2	3	4	5
		44- Misrepresenting the facts and revenues of private contractors/consortium during bidding process.	1	2	3	4	5	1	2	3	4	5
		45- Setting up front company as joint venture company or creating fictitious companies to bid or allowing multiple bids under different names by same bidder to show competitive bidding process.	1	2	3	4	5	1	2	3	4	5
	Contract Award	46- Conflict of interest and corruption in the evaluation process (e.g. familiarity with bidders over the years, personal interests such as gifts or additional/secondary employment).	1	2	3	4	5	1	2	3	4	5
		47- Conflict of interest and corruption in the approval process i.e. no effective separation of financial, contractual and project authorities in delegation of authority structure.	1	2	3	4	5	1	2	3	4	5
		48- The absence of objective decision criteria or the inadequate weighting of the various criteria to favour particular bidder.	1	2	3	4	5	1	2	3	4	5
		49- Single-source and repeat contract award as a result of official's personal preferences.	1	2	3	4	5	1	2	3	4	5
		50- Disqualifying all lower priced bidders on the basis of spurious technical infringements.	1	2	3	4	5	1	2	3	4	5
		51- Long period of time between notification of the preferred bidder and contract award.	1	2	3	4	5	1	2	3	4	5
		52- Award to an initial low bid price with "hidden" possibilities to expand the contract at a later stage to recover the economies for the vendor.	1	2	3	4	5	1	2	3	4	5
		53- Lack of access to records on the bid evaluation and approval procedure.	1	2	3	4	5	1	2	3	4	5
		54- Approval of oversized or inflated cost of project.	1	2	3	4	5	1	2	3	4	5

Payments and Contract Management/Post Bidding	Payments and Contract management	55- Certification of the execution of the works may not correspond with the real supply.	1	2	3	4	5	1	2	3	4	5
		56- Changing subcontractors or allowing sub-letting construction work to petty contractors.	1	2	3	4	5	1	2	3	4	5
		57- Large number of contract renegotiations by one party or several to secure more favourable terms.	1	2	3	4	5	1	2	3	4	5
		58- Approving unjustified extensions in project execution/financial closure deadlines.	1	2	3	4	5	1	2	3	4	5
		59- Approving unjustified design and specification changes to create more variation orders.	1	2	3	4	5	1	2	3	4	5
		60- Approving construction work and services below standard specifications.	1	2	3	4	5	1	2	3	4	5
		61- Failure to monitor performance of contractor in particular lack of supervision (or collusion between the supervisor and the contractor) over the quality and timing of the process that results in theft of new assets before delivery to end-user or before being recorded in the asset register.	1	2	3	4	5	1	2	3	4	5
		62- Approving claims for false invoices of non-supplied, inferior quality, or inflated cost of construction material and equipment or unexecuted or exaggerated quantities of construction work.	1	2	3	4	5	1	2	3	4	5
		63- Deficient separation of duties and/or lack of supervision of public officials leading to false or duplicate or exaggerated invoicing for goods and services not supplied and for interim payments in advance of entitlement.	1	2	3	4	5	1	2	3	4	5
		64- Difficulty in benchmarking costs because of remoteness or novelty of construction site/project, limited suppliers and expense of transporting materials.	1	2	3	4	5	1	2	3	4	5
		65- Approving in advance/speedy payment claims project works OR awarding long term unjustified incentives to concessionaire/private consortium during renegotiations.	1	2	3	4	5	1	2	3	4	5

Appendix B



The University of Manchester

Many thanks for taking time to complete the survey which is part of PhD research project. The questionnaire is designed in a way that it should not take you more than 30 minutes to complete.

The outcomes of the research will be solely academic and the participant will remain anonymous in any analysis and reporting of the research. This will also be ensured that any information you provide would be treated as strictly confidential.

Please do not hesitate to contact on aqsa.shabbir@postgrad.manchester.ac.uk if you find any queries

A brief introduction to this project is given below:

Public procurement of infrastructure projects, procured through either traditional or Public-Private Partnership (PPP) route of procurement, is potentially vulnerable to corruption (i.e. the misuse/abuse of entrusted power for personal gain either at one's own instigation or in response to inducements).

In relation to infrastructure procurement; traditional procurement can be described as the route of procurement in which government specifies the quantity and quality of the service/facility, while the infrastructure is constructed by private companies. On completion, the asset is transferred to and operated by government. On the other hand, PPP can be described as an arrangement between the government and one or more private partners (which may include the operators and the financiers) according to which the private partners deliver the service/facility under a concession for a defined period of time and share a sufficient amount of risk with government. A questionnaire has been produced to capture the influence of corruption on infrastructure procurement in Pakistan to investigate 1) the most frequent corrupt practices in traditional and PPP infrastructure procurement processes in Pakistan, 2) to investigate the stakeholders' perceptions of institutional trust-building mechanisms in the context of infrastructure procurement market in Pakistan.

Your response to this questionnaire would be crucial for successful completion of this research project.

Many thanks in the anticipation of your help.

General Information of Respondent

Organisation Name: (Optional)

Role of Organization: *

Your Position/Role in Organization: *

Your Industrial/Research Experience: *

Question 1: Please rate following corrupt practices for their likelihood of occurrence during traditional and Public-Private-Partnership (PPP) infrastructure procurement process in Pakistan:

1.1- To identify and prioritise projects based on vested interests of parties involved.

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.2- To under-estimate initial project cost for planning approval by government.

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.3- To hire favourite consulting services for project feasibility study and preparation of specifications/bid documents.

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.4- To decide land use & price (as agriculture, residential or commercial) based on vested interests of parties involved.

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.5- To approve favourable environmental impact assessment/planning proposal.

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.6-**a) To certify procurement process unnecessarily urgent to avoid requirement of competitive bidding procedure.**

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.6-**b) To accept unsolicited bids leading to sub-optimal project design and construction.**

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.7- To leak confidential inside information to help favourite bidder to prepare competitive bid.

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.8- To set evaluation criteria to fit particular bidder.

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.9- To prepare tender documents in a way to favour private contractor/consortium.

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.10- To misrepresent the facts and revenues of private contractors/consortium during bidding process.

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.11- To set up front company or as joint venture company or to create 'Fictitious Companies' to bid or allowing multiple bids under different names by same contractor to show competitive bidding process.

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.12- To approve over-designed or inflated cost of project.

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.13- To award contract to favourite bidder.

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.14- To negotiate or renegotiate contract by one party or several to secure more favourable terms.

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.15-**a) To approve in advance/speedy payment claims for project works.**

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.15-**b) To award long term unjustified incentives to concessionaire/private consortium.**

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.16- To change subcontractor/allowing sub-letting of construction work to petty contractors.

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.17- To approve construction work and services below standard specifications.

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.18- To approve unjustified design and specification changes to create more variation orders.

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.19- To approve unjustified extensions in project execution/financial closure deadlines.

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.20- To approve claims for false invoices of non-supplied, inferior quality or inflated cost of construction material & equipment or unexecuted or exaggerated quantities of construction work.

	Almost Never	Occasionally	Sometimes	Frequently	Almost Always
a) Traditional Procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Public Private Partnership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Continue..

Question 2: Please choose one of the given options for the following statements: (Please note IP stands for Infrastructure Procurement)

2.1- There is an effective third-party authority in IP market to monitor all contractors and help resolve conflicts.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.2- There is an effective third-party authority in IP market to monitor public procurement activities and undertakes reviews regularly.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.3- There is an effective third-party authority in IP market to undertake disciplinary actions on reports of misconduct by public procurement officials.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.4- There is an effective third-party mechanism in IP market to assure that completed projects are in accordance with the tender specifications.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.5- There is an effective third-party enforcing mechanism in IP market to assure that all transactions are conducted properly

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.6- I believe that this IP market undertakes into account the ethical considerations in recruitment and performance appraisal processes of public procurement officials.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.7- Publishing the vacant positions and recruitment rules is an important part of this IP market's recruitment process by public procurement organisations.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.8- Assessing the competencies of new contractors entering into the local market is an important part of this IP market's selection process.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.9- I believe that this IP market undertakes a thorough screening process before private contractors are allowed to transact in its marketplace.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.10- I believe that this IP market makes a substantial effort to assess the private contractors' true competencies.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.11- This IP market imposes formal agreements that detail private contractors' obligations.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.12- Participating in this IP market implies that private contractors have formal contractual agreements with clients/procurement organisations.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.13- A considerable amount of information about the performance history of most contractors is available from this IP market.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.14- If any contractor misconducts on a project, a reliable feedback mechanism is provided by this IP market to inform client/procurement organisations.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.15- There is an effective mechanism in this IP market to allow client/procurement organisations to publicize their contracting experience with other contractors.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.16- This IP market promotes cooperative norms for contractors to resolve any transaction disputes.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.17- This IP market provides an effective mechanisms for redress against decisions of public procurement organisations.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.18- Most contractors are willing to make cooperative adjustments to transact successfully.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.19- Procurement organisations/clients and contractors in this IP market exchange a considerable amount of information before transacting.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.20- This IP market provides ways for clients/procurement organisations to receive relevant information from contractors before transacting.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.21- This IP market provides ways for requesting justification of procurement decisions by procurement organisations.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.22- Contractors rarely take advantage of clients/procurement organisations in this IP market.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.23- This IP market provides safeguard to whistle-blowers reporting wrongdoings during procurement activities.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.24- This IP market imposes formal standards detailing expected behaviour during potential conflicts-of-interest by public procurement officials.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

2.25- This IP market requires declaration of conflicts of interest by public procurement officials.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

You are almost done. By Pressing the "forward" button given below in blue, survey will be submitted and you will no longer be able to make changes. Please feel free to contact at " aqsa.shabbir@postgrad.manchester.ac.uk " if you find any difficulty. Please use text box given below if you have any additional comments.

Once again many thanks for your precious time and worthy input. Best Regards

» Redirection to final page of eSurvey Creator ([change](#))