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Combating Corruption in Indian Public Procurement- some exploratory case studies

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Abstract

This paper has adopted the exploratory case study method of analyzing a few recent cases of public procurement irregularities on Indian Railways documented by the vigilance departments and the CAG available in public domain to inquire into the following issues: (a) how do irregularities and instances of corruption persist in spite of safeguards and thereby find the deficiencies of the current procurement processes and control mechanisms, (b) recommending appropriate corruption prevention methods for arresting the deficiencies in the Indian context. The recommendations following the case analyses are the need for comprehensive set of measures including strengthening the accountability, monitoring and whistleblower mechanisms, training of procurement officials and building a strong information system.

Combating Corruption in Indian Public Procurement- some exploratory case studies

1. Introduction

Public procurement in the Indian context is the (a) procurement of goods under Sales of Goods Act, 1930 for buying assets for replacement or expansion of services, maintenance and repair spares, plant and machinery, and (b) procurement of works and services under Indian Contracts Act, 1872 for construction of buildings, providing security to premises, maintaining computer assets etc by the public sector. Public procurement in India has been growing at a compound annual growth rate of 14% over the last three decades and currently accounts for nearly 25-30% of India's GDP (CUTS International 2012, 2). Indian Railways (IR) has been chosen for this study of Indian public procurement since IR is one of the largest public procurers of goods and services in India, possessing a monopsony position, since firms engaged in transactions with them have no other alternatives to pursue business. (Bovis 2007, 7) About 75 percent of IR's annual procurement expenditure of around Rs.360 billion (Indian Railways 2014) was for procurement of works (such as building of offices, bridges and railway tracks) and services (such as maintenance of computers, coach air conditioners or railway tracks) and remaining for procurement of goods (such as rails, electric motors, paints, diesel oil, medicines and office stationery). (Ministry of Railways(Railway Board) n.d.) Further, IR was also chosen for this study since IR is the only Indian public sector organization whose working and procurement processes, along with recent cases of public procurement irregularities documented by the vigilance departments and the Comptroller and Auditor General (CAG) are available in detail in the public domain. These cases pertain to procurement of works and services as well as for procurement of goods by various departments of IR and are thus quite representative of the procurement activities on IR. Since the gamut of procurement activities on IR is quite comprehensive, it can be safely assumed that these cases are representative of public procurement in India in general.

The risks of corruption (where corruption is defined as “abuse of entrusted power for private gain” (Lindskog, Brege and Brehmer 2010, 172)) in public sector procurements are higher due to larger sizes of contracts involved "which dwarf the average salaries of most of the people dealing with public procurement", "is inherently discretionary....because it acts as a commercial entity-

decides what to buy, how and from whom and what to sell- often without having enough commercial experience" (Asian Development Bank and Organisation for Economic Cooperation and Development 2008, 15-16) and involves fierce competition among suppliers since "government contracts clearly mean valuable, often long-term business opportunities" (Organisation for Economic Cooperation and Development 2007, 11). Given the involvement of roughly one third of public money being spent in procurements (World Bank 2009, 14) and the deleterious effects of corruption in diminishing competition, increasing the cost of procurement and resulting in procurement of low quality of goods/services procured, preventing corruption in public procurement is of utmost importance. This aspect is all the more important for developing countries where public procurement is also used to accelerate the economic growth, steer the market, promote entrepreneurship and innovation, and attain social outcomes (Research Cell-National Academy of Defence Financial Management n.d.).

Transparency International gives a corruption risks for each stage of procurement, which is reproduced in Table 1. (Transparency International 2006, 17-20). The phases detailed in the Transparency International framework matches with that of IR and all public procurements in India.

Table 1: Public Procurement Corruption risks

Phase Number	Phase Description	Risks of corruption
I	Needs assessment phase/ demand determination	a. Procurement is not necessary b. Demand is over-estimated c. Procurement is economically unjustified d. "Tagged contract" or procurement planned from a "pre-arranged" contractor
II	Preparation phase/ process design & bid documents preparation	a. bidding documents or terms of reference designed to favor a particular provider b. un-necessary complexity of bidding documents used to create confusion to hide corrupt behavior and make monitoring difficult
III	Contractor selection and award phase	a. decision makers are biased (bribes, kickbacks or conflicts of interest involved) b. Selection criteria are subjective in ways that allow biases to play a role and remain unattended. c. An advantage to a particular bidder is granted through the exchange of confidential information before bid submission or during the clarification period. Clarifications are not shared with all the bidders. d. Confidentiality is abused and extended beyond legally protected information making monitoring and control difficult. e. The grounds for the selection of the winner are not made public (transparency of bid evaluation). f. Excessive (unnecessarily high) price as a result of limited or non-existent competition.
IV	Contract implementation phase	a. Winning bidders/contractors compensate bribes and other extra payments with poor quality, defective or different specifications than those contracted. Faulty or sub-specification work execution, requiring early repairs or expensive correction. b. Contract renegotiation or "change orders" introduce substantial changes to the contract, often in small increments that can be decided by site engineer. c. Price increases during execution through "change orders" reflecting changes in specifications or cost increases, facilitated often by collusion between corrupt contractor and corrupt control official. d. False or in-existent claims are filed. e. Contract supervisors or monitors are "bought" or are not independent and willing to justify false or in-existent claims. f. Contract renegotiation is allowed or performed introducing substantial changes that render the

Source: (Transparency International 2006, 17-20)

Research question and motivation

India has been a corruption-ridden society, as described by (Kohli 1975, 67): "Corruption is the single largest element to be found most in India. All roads, from the maternity hospital to the crematorium, smell of corruption. No individual is free from it, no area can be found where corruption is not a ritual". Efforts to harness corruption in public procurement in India have been in progress since Independence. Few notable milestones in this direction are the (a) granting of statutory powers of compliance auditing under Article 149 of the Constitution of India to the CAG to examine all public procurement cases to ferret out instances of irregularities committed in award of contracts or instances of wasteful expenditure and reporting to Parliament and State Legislatures for examination of erring officials by the Public Accounts Committee(PAC) (b) setting up of the Central Bureau of Investigation (CBI) in 1963 to investigate and prosecute cases of corruption in public procurement (c) creation of the Central Vigilance Commission (CVC) along with vigilance departments in all public organizations following the recommendations of the Santhanam Committee on Prevention of Corruption in 1964 to focus on the integrity of public servants carrying out procurement functions and issue guidelines on procurement matters (d) enactment of the Right to Information Act 2002 requiring public bodies to share procurement information with stakeholders (e) enactment of the Lokpal and Lokayuktas Act 2013 following India's ratification of the United Nations Convention against Corruption, providing for the establishment of Lokpal for the Centre and Lokayuktas for the States with powers to conduct enquiries into allegations of corruption against public functionaries including Prime Minister, Ministers and Members of Parliament as well as conduct prosecutions; the Lokpal and Lokayuktas are yet to start functioning and have therefore not been discussed in this paper. The oversight bodies were further strengthened with the promulgation of the Prevention of Corruption Act 1988 and the Central Vigilance Commission Act 2003 following the judgment of the Supreme Court in the Vineet Narain vs. Union of India case of 1997.

Procurement processes of public organizations have gradually been strengthened over the years, under prodding of these oversight bodies, to incorporate many of the methods listed in Table 2 for preventing public procurement corruption. The World Bank in its Country Procurement Assessment Report (World Bank 2003, 8) states "By and large, the procurement by the Central

Government ministries, departments and sub agencies works satisfactorily when compared to public procurement in other developing countries.”

IR has been diligently pursuing its goal of eliminating corruption in public procurement, as is evident from its regular amendment of rules and procedures to comply with advisories from oversight bodies and nurturing a strong internal vigilance department. The CVC (Central Vigilance Commission n.d., 10) notes that “It has also been observed that the quality of the investigations reports received from the Railways is, generally speaking, up to the mark. More importantly, fact also is that almost every case receives due and adequate attention at the level of Sr. functionaries in the deptt. both at the zonal level and also at the level of the Railway Board.” (Nag 2013, 64-67)'s paper has examined the efficacy of procedures and oversight bodies in the procurement activities of IR and has found that all the risks given in Table 1 are covered satisfactorily subject to adequate oversight and proper judiciousness and incorruptibility of IR's top management.

However, irregularities and instances of corruption continue to persist in IR as evident from recent few examples of recent criminal prosecutions by the CBI: (a) a Divisional Engineer of North Frontier Railway, Tinsukia prosecuted for demanding and accepting bribe from a contractor for processing his pending bills. (b) a General Manager, North Western Railway, Jaipur prosecuted for possession of assets disproportionate to income (c) a Senior Materials Manager, New Delhi prosecuted for entering into criminal conspiracy with a private firm for procurement of materials for the Railways at exorbitant rates (d) a Senior Divisional Engineer, Samastipur Division, East Central Railway prosecuted for entering into criminal conspiracy with private persons for fraud in awarding a contract for restoration of railway track (e) a Chief Engineer, South-Western Railway, Hubli prosecuted for rendering favors to a private firm in the award of tender for constructions of road and bridge, thereby causing an undue loss of to Railway and corresponding gain to accused persons (Central Bureau of Investigation 2010, 10-14, Central Bureau of Investigation 2011, 8-9, Central Bureau of Investigation 2012, 11-15).

In such circumstances, the following questions arise: (a) How do irregularities and instances of corruption in Indian public procurement persist, in spite of safeguards? (b) Are the common methods of prevention of corruption (listed in Table 2) capable of preventing the irregularities and instances of corruption in Indian public procurement? This paper seeks to address these

research questions. The deficiencies of the current procurement processes and control mechanisms can be obtained from answers to the first question. The efficacy of corruption prevention methods can be gauged from answers to the second question. These research questions are of utmost concern, given the growing public procurement activities in a developing country. It may also be noted that the different anti-corruption methods require different levels of resources and time for implementation. Given the constraints of resources, this exploratory study would aid researchers and policy makers in deciding the focus of anti-corruption efforts.

Irregularities

While corruption has been defined in literature and irregularities have been discussed in literature (Tabish and Jha 2011, 262) (Sohail and Cavill 2007, 115), there is no definition of irregularities in literature. Irregularity is defined in this paper as instances where (a) there has been a deviation from the standard operating procedure of procurement, (b) interests of the public agency has been compromised (thereby resulting in lower quality of material received or higher costs incurred, for example), (c) rights of vendors have been compromised (in terms of delay in payment or unfair evaluation of bids, for example). An instance of irregularity could contain one or more of the conditions (a), (b) and (c). It will be appreciated that an irregularity is easier to detect than proving the element of "private gain" of a corrupt act. Irregularity has been an area of scrutiny by oversight bodies since "one of the fundamental obstacles in combating fraud and corruption in public procurement is the sheer difficulty in detecting wrong doings..this difficulty stems from the fact that there is often no clear perpetrator nor victim, rather a group of individuals in collusion, with common interests in maintaining secrecy around the corrupt acts" (OECD 2005, 12). An example of irregularity is as follows: say bids are invited for equipment which must be capable of withstanding temperatures upto 100 degree celsius and none of the bids received offer equipment capable of withstanding temperatures beyond 90 degree celsius; in this case the specification of the item tendered is itself defective or no bids have been submitted by manufacturers/dealers of the right type of equipment- in such a situation an irregularity will occur if order is placed on any bidder on grounds of urgency and if the rules of procurement require that the specification of the ordered item must at least conform to or be better than the tendered specification. If the rule of procurement requiring that the specification of the ordered item must conform exactly to that specified is followed strictly, the tender should be discharged

and a fresh tender issued. The bids for a fresh tender must be opened after a mandatory period (a minimum of one month in case of IR) and again there would not be any guarantee that bids would be received for the equipment conforming exactly to specifications. Thus, such instances of irregularity would be common in organizations such as IR which have to provide 24/7 services and grounds of urgency exist. Irregularity might or might not imply the performance of a corrupt act with an element of "private gain". In the above example, two distinct situations may arise: (a) there might be an element of genuine urgency involved or (b) an order may be placed for inferior equipment by creating a sense of urgency. The situation (a) is not a corrupt act and is actually done by the procurement official in the interests of the organization. The situation (b) might imply an element of "private gain" of the procurement official in connivance with a supplier or might be due to other reasons (such as fulfilling required quota of placing orders). There are two ways of tackling such irregularities- (i) make specifications and procurement rules and processes such that "all the opportunities for discretion" are thought out to "limit discretion" (Asian Development Bank and Organisation for Economic Cooperation and Development 2008, 40) of procurement officials; this might be difficult to carry out in view of rapid changes in equipment required, technology, vendor base or market dynamics; further there might be a situation as given in the above example, wherein following rules exactly might lead to paralysis of the functioning of the public sector (ii) someone is given the responsibility of judging whether there is actually a genuine reason for irregularity; this responsibility has been given to IR's top management as discussed in Section 2.

Literature Survey

Corruption per se has been vigorously researched as is evident from a large body of literature available. Research in corruption has covered broadly the following two themes: understanding the reasons for corruption (Graaf 2007) (Quah. 2006) (Bardhan 2006) and analyzing best practices of corruption prevention such as effective anti-corruption agencies, transparency and disclosure of tender evaluation models (Quah" 1999) (Smith 2008) (Ohashi 2009) (Mateus, Ferreira and Carreira 2010). Corruption in India has also been researched from various angles: the reasons for prevalence of corruption in India (Tummala 2002) (Quah.. 2008) (Heston and Kumar 2008) (Jauregui 2014), role of oversight bodies (Vittal 2001) and the effect of preventive methods such as Right to Information Act (Jenkins and Goetz 1999) ,e-government (Ojha and

Palvia 2012) and combination of strategies such as rules and regulations, training and fear of punishment (Tabish and Jha 2012). A large body of reports has also been published by the United Nations (United Nations Office on Drugs and Crime 2006), World Bank (World Bank n.d.) (Bhargava and Bolongaita 2004) (World Bank 2009) (World Bank 2003) (Arvis and Berenbeim 2003), Asian Development Bank (Asian Development Bank n.d.) (Asian Development Bank & Organisation for Economic Cooperation and Development 2011) (Asian Development Bank and Organisation for Economic Cooperation and Development 2006) (Asian Development Bank and Organisation for Economic Cooperation and Development 2008), Transparency International (Transparency International n.d.) (Transparency International 2006) (Transparency International 2012) (Transparency International 2013) (Transparency International 2014) and the Organisation for Economic Cooperation and Development (OECD n.d.) (OECD 2011) (Organisation for Economic Cooperation and Development 2007) (Organisation for Economic Cooperation and Development 2007) (OECD 2005) (OECD 2009) on areas of corruption in public procurement.

Table 2

Sl.No.	Methods of Prevention of Public Procurement Corruption	Extent of Implementation on IR
1	Adequate Transparency: transparency of contract opportunities, processes and decisions, allowing scrutiny by all stakeholders (including civil society, media and the public); clear rules and regulations is one of the pre-requisites of transparency (Organisation for Economic Cooperation and Development 2007, 55), including aspects such as pre-disclosure of bid evaluation process while inviting bids and disclosure of reasons for acceptance or rejection of bids, clear rules on exceptions to competitive bidding (Asian Development Bank and Organisation for Economic Cooperation and Development 2008, 61)	Partially implemented
2	Adequate Accountability: accountability of procurement officials, along with statutory procurement framework (World Bank 2003, 20) to enforce accountability and high risk of misconduct (Davis 2004, 66-68) (Sohail and Cavill 2007, 163-200), criminal liability for bribery (Asian Development Bank and Organisation for Economic Cooperation and Development 2008, 16), substantial penalties for misconduct (Asian Development Bank and Organisation for Economic Cooperation and Development 2008, 51), confiscation of bribery proceeds (Asian Development Bank & Organisation for Economic Cooperation and Development 2011, 224)	Partially implemented
3	Fairness & time bound procurement process: fair, impartial and time bound conduct of procurement process, with equal opportunities and equal treatment of suppliers (CUTS International 2012, 7-9) (Transparency International 2006, 42)	Partially implemented
4	Adequate Monitoring & Oversight: monitoring and oversight mechanisms, adequately staffed by experts and with adequate equipment and financial resources to enhance possibility of discovering irregularities, especially in contract implementation phases (Quah" 1999, 86-87) (Thai 2008, 19-22); independent anticorruption bodies draw powers from comprehensive anti-corruption legislation (J. S. Quah 2004) , free from political control (Quah' 2008, 18), removed from police control and must be itself incorruptible (Quah" 1999, 86), monitor procurement officials (in terms of lifestyle, social contacts with suppliers, unexplained delays, frequent award of contracts to same bidder) (Transparency International 2006, 37)	Partially implemented
5	Multiple agencies: more than a single agency handling a particular procurement process, thus making collusion, extortion or bribery difficult; further the same agency should not be involved in different phases (say, bid evaluation and contract implementation phases) (Asian Development Bank and Organisation for Economic Cooperation and Development 2008, 54)	Partially implemented
6	Grievance Handling: independent grievance redress mechanism (World Bank 2003, 21) to handle complaints of suppliers in a timely manner (Asian Development Bank and Organisation for Economic Cooperation and Development 2008, 51) (OECD 2009, 14) (Asian Development Bank and Organisation for Economic Cooperation and Development 2006, 24)	Not implemented

7	Database: database to enable effective monitoring of supplier price and performance, thus enabling informed decision making in bid evaluation (Asian Development Bank and Organisation for Economic Cooperation and Development 2008, 99) (Smith 2008, 87) (World Bank 2003, 24)	Not implemented
8	Procurement Officials codes, salaries, training: procurement officials should be guided by clear behavioral rules or code of conduct (McCampbell and Rood 1997, 1115, Hunsaker 2009) (Asian Development Bank and Organisation for Economic Cooperation and Development 2006, 11-26), receive good salaries (Quah" 1999, 2), receive training in best practices of procurement, mandatory declaration of personal assets, disclosure of conflict of interest (Asian Development Bank and Organisation for Economic Cooperation and Development 2008, 16,54, 61)	Partially implemented
9	Whistle Blower mechanisms: whistle blower encouragement and protection mechanisms, members of society including public officials encouraged to alert monitoring agencies (Asian Development Bank and Organisation for Economic Cooperation and Development 2008, 53) (OECD 2009, 14)	Implemented
10	Adequate Procurement Process: processes reviewed periodically to reduce opportunities for corruption (J. S. Quah 2004), E-procurement (procurement through electronic media) (Asian Development Bank and Organisation for Economic Cooperation and Development 2008, 16,111), (World Bank 2003, 23) , information systems with mechanisms for red flagging of deviations of procedures (Asian Development Bank and Organisation for Economic Cooperation and Development 2006, 23), tracking contract changes, establishment of specialised procurement oversight body to advice procuring agencies, draft key procurements in legal framework, manage procurement reforms (Asian Development Bank and Organisation for Economic Cooperation and Development 2008, 53, 99) (OECD 2009, 14) (World Bank 2003, 20), introduce standard contract documents (World Bank 2003, 22), develop performance indicators to monitor process time, price trends and efficiency of procurement (World Bank 2003, 23)	Partially implemented
11	Adequate provisions for sanctions against Suppliers and Contractors : sanctions for bribery (Asian Development Bank and Organisation for Economic Cooperation and Development 2008, 16, 145), (Asian Development Bank and Organisation for Economic Cooperation and Development 2006, 22) (World Bank 2003, 23) criminal liability for bribery (Asian Development Bank & Organisation for Economic Cooperation and Development 2011, 222)	Partially implemented
12	Civil Society involvement: through scrutiny of public procurement proceeding by use of integrity pacts (Asian Development Bank and Organisation for Economic Cooperation and Development 2008, 16, 63,189) (Transparency International 2013, 8) (Asian Development Bank and Organisation for Economic Cooperation and Development 2006, 25)	Not implemented

Source: Compiled from various sources by author

(Tabish and Jha 2011, 262) observed that “corruption is difficult to identify since it is carried out, in most cases, clandestinely and away from the public eye and records. Corrupt practices are normally concealed. It is very difficult to prevent or uncover these practices for anyone who does not have the appropriate skills, access to the relevant documents and people, and an in-depth involvement in the project”. It is probably for this reason that academic enquiry in Indian public procurement corruption has been far and few between. Literature survey has revealed only three papers covering the area of public procurement corruption in India-(i) (Tabish and Jha 2011)’s paper wherein a questionnaire survey was undertaken from CVC officials to ascertain the most common irregularities in works procurements; the findings were that the most common irregularities were improper cost estimation in the design & bid documents preparation phase, inadequate performance measurement in contract implementation phase and inadequate publicity to bid invitations in design & bid documents preparation phase, in that order (ii) (Singh 1999)’s paper summarizing common procurement frauds prevalent in India, based on the author’s experience in the CBI; the paper lists few additional types of frauds typical to India (such as order splitting possibly to favor particular firms, high incidence of emergency procurements wherein standard processes are bypassed, incidences of bid submissions by fictitious firms to

favor particular firms) in addition to nearly all the risks listed in Table 2 (iii) (Nag 2013)'s paper which examines issues of IR's organizational structure, procurement organization, source selection methodology, procurement oversight and regulation and their impact on the economy, efficiency, transparency and accountability aspects of procurement. The literature on public procurement in India is again quite sparse; few papers and reports have been published in recent years in the context of the proposed Public Procurement Act (PRS Legislative Research 2013), WTO negotiations (CUTS International 2012), Free Trade Negotiations with the European Union (Khorana and Asthana 2014) and country assessment by the World Bank (World Bank 2003). None of these papers or reports directly addresses the research questions posed in this paper. The author has come across only two papers examining the efficacy of anti-corruption methods: (i) a case study on reduction of public procurement expenditure in Japan's municipal public works, wherein it was found that transparency reduced expenditure by 8% (Ohashi 2009) and (ii) a study of impact of tender evaluation models in Portuguese public procurement. (Mateus, Ferreira and Carreira 2010) Thus this research will fill an important gap in understanding the impact of corruption prevention methods especially in the Indian context.

Theoretical Framework and Research Method

Various reports and academic papers have listed different methods of preventing corruption. These have been compiled in Table 2. Most of these methods are incorporated in the United Nations Convention against Corruption (United Nations Office on Drugs and Crime 2006), which having being ratified by India in 2011. Analysis of IR's procurement process indicates that many methods have either been partially or not implemented at all- a detailed discussion on the extent of implementation is given in Section 2. Methods which are partially or not implemented at all can be considered as independent predictor variables to understand and explore reasons for instances of corruption or irregularities. The dependent variables are the occurrence or non-occurrence of irregularity and corruption. These dependent and independent predictor variables allow construction of the following theoretical hypotheses: irregularities and corruption occurs due to (i) lack of transparency where transparency is defined as the "visibility of information", leading to "verifiable inference or conclusions" (Michener and Bersch 2013, 234) ; lack of transparency leads to opportunities in corruption due to asymmetry of information between stakeholders (ii) lack of accountability where accountability is defined as the "obligation for

public officials to report on the usage of public resources and answerability of government to the public to meet stated performance objectives" (Lourenco 2013, 243); lack of accountability encourages corruption; further transparency is seen as a "tool for accountability" (Michener and Bersch 2013, 235) (iii) lack of time limits in the procurement process; if the procurement process is not time bound, procurement officials may deliberately delay decision making and payments thereby discouraging suppliers who are not willing to cater to demands of corrupt officials (iv) inadequacy of monitoring and oversight mechanisms; this aspect is discussed in detail elsewhere in the paper (v) single agency involved in all stages of procurement; this encourages corruption since it is easier for procurement officials and suppliers to collude and compromise on the performance and quality aspects (vi) lack of grievance handling mechanism; such a mechanism while giving confidence of fair play to suppliers, may also bring to light corrupt practices (vii) lack of databases; databases assist in fair evaluation of supplies (viii) inadequate conduct code, salaries, training etc of procurement officials (ix) inadequate whistleblower encouragement and protection mechanisms; whistle blowing has been defined as "the disclosure by organization members (former or current) of illegal, immoral or illegitimate practices under the control of their employers, to persons or organizations that may be able to effect action" (Near and Miceli 1995, 680); whistle blowers are very useful in bringing corrupt practices to the notice of authorities (x) Inadequacies in processes; inadequacies in processes lead to irregularities, which may or may not be due to mala fide intentions- corruption may thus thrive on inadequacies in processes taking advantage of benefits of doubt (xi) inadequate accountability of suppliers which results in promotion of corrupt activities by suppliers (xii) inadequate civil society engagement; the aspect of civil society engagement through integrity pacts is discussed in detail in Section 2. Predominance of certain independent predictor variables in understanding cases of corruption and irregularity will thus answer the research questions and can be recommended as credible solutions for combating corruption in public procurement in India. These predictor variables are chosen such that can be qualitatively assessed in the context of this paper.

Singapore's then Prime Minister Lee Kuan Yew had stated that "the strongest deterrent is in a public opinion which censures and condemns corrupt persons, in other words, in attitudes which make corruption so unacceptable that the stigma of corruption cannot be washed away by serving a prison sentence" (J. S. Quah 1988, 93). However, such predictor variables as social attitudes, cultural traditions (Quah. 2006) (Smith 2008, 128), religious beliefs (Tummala 2002, 64) or

group culture (Graaf 2007, 52) are not considered in the theoretical framework of this paper due to the paucity of data in this regard.

The exploratory case study method has been chosen to address the research questions posed in this paper, since "case studies are the preferred strategy when "how" or "why" questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context" (Yin 2003, 1). (Graaf 2007)' s paper opines that the case study method is appropriate for corruption studies since case studies "offer the advantage of richer details of actual cases and that contextuality" and "attention can be paid to individuals within the culture and organisation". In this paper, cases have been analysed using the theoretical framework to address the research questions and thereby propose solutions for combating corruption in public procurement which are grounded in reality.

Seven cases of public procurement irregularities on IR documented by the vigilance departments and the CAG available in public domain have been taken up for this purpose. These cases have been chosen to represent a wide variety of situations: (a) cases detected by internal (cases A,E,F,G) and external (cases B,C,D) monitoring agencies (b) cases of procurement of works and services (cases A,D,F,G) and goods (cases B,C,E) (c) cases involving situations where IR has contested findings of external monitoring agencies(case B,C,D) (d) cases involving disciplinary proceedings (cases A,E,G) and prosecution under the Prevention of Corruption Act (case F) (e) cases involving contractor selection and award phase (cases A,B,C,D) and contract implementation phase (cases E,F,G) (f) cases which pose different degrees of assessment of wrong doing in irregularities. Each case is analyzed in the context of the theoretical hypotheses, to determine whether the situation was caused by any one or a combination of predictor variables. Details of cases involving corruption are not available in public domain and are therefore not discussed in this paper.

This research is based on examination of IR's process manuals and annual reports of the Central Vigilance Commission, Central Bureau of Investigation, Comptroller & Auditor General and the Indian Railways along with informal discussions with senior management personnel. IR personnel have been found to be reluctant to participate in formal interviews or answer questionnaires for fear of transgressing provisions of Official Secrets Act 1923 (Government of India n.d.) or The Railway Servants(Conduct) Rules 1966 (Indian Railways n.d.). This paper is

organized as follows: the organizational structure and procurement process of IR is discussed in Section 2; discussion on execution and monitoring process lacunae using cases is discussed in Section 3 followed by analyses and future research directions in Section 4.

2. Organizational structure and procurement process of IR

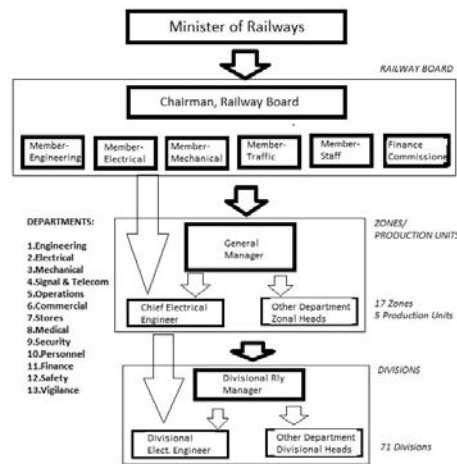


Fig 1: Organizational structure of IR

Source: created by author from (Ministry of Railways 2009, 13)

Organization structure of IR

The IR network is carved into geographical zones and divisions for administrative convenience. IR has a matrix form of organization at three levels, as shown for the Electrical Department in Fig 1.

Table 3: Activities involved in procurement of works/services and goods on IR

Phase	Activity	Goods Procurement			Related Case	Phase	Activity	Works/Services Procurement			Related Case
		User	Finance	Stores				User	Finance	Stores	
0	a. Vendor approval	•				0	a. Vendor approval	•			
I	a. demand estimation	•		•		I	a. demand estimation	•			
	b. cost estimation		•	•			b. cost estimation	•	•		
II	a. Preparation of specifications	•				II	a. Preparation of specifications	•			
	b. Determination whether bidding will be restricted to approved vendors only	•		•			b. Determination whether bidding will be restricted to approved vendors only	•			
	c. Preparation of bid documents			•			c. Preparation of bid documents	•			
	d. calling for bids			•			d. calling for bids	•			
III	a. opening of bid documents	•	•			III	a. opening of bid documents	•	•		
	b. preparation of bid evaluation documents		•	•			b. preparation of bid evaluation documents	•	•		
	c. evaluation of bids and	•	•	•	B,		c. evaluation of bids and	•	•	•	D

<hr/>			<hr/>		
	recommendation for award of contract		C		recommendation for award of contract
	d. award of contract	•			d. award of contract
	<hr/>				A
IV	a. inspection of goods	<i>done by external agency</i>	E	IV	a. inspection of works/services
	<hr/>				•
	b. acknowledging receipt of goods				b. acknowledging completion of works
	<hr/>				•
	c. payment based on acknowledgement	•			c. payment based on acknowledgement
	<hr/>				•
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Source: created by author using procurement procedure outlined in Indian Railway Financial Code (Ministry of Railways 1998), Indian Railway Code for the Accounts Department (Ministry of Railways 1997) and the Indian Railway Code for the Stores Department (Ministry of Railways 1990)

Procurement Process on IR

Procurement of works and services is done by the user departments, whereas the stores department is charged with the responsibility of procurement of goods used by all other departments of IR. Most of the procurement is done at the Zonal level; procurement of a few high value strategic items is done at the Railway Board level. The chronological list of activities involved in procurement of works/services and goods on IR is given in Table 3. The phases indicated refer to the phases described in Transparency International's framework in Table 2; an additional '0' phase of vendor approval has been introduced, which is an ongoing process (generally carried out by the Research Design and Standards Organization (RDSO) of IR) and not connected with a particular procurement case. The Indian Railway Financial Code (Ministry of Railways 1998), Indian Railway Code for the Accounts Department (Ministry of Railways 1997) and the Indian Railway Code for the Stores Department (Ministry of Railways 1990) lays down the procedure for procurement.

It may be noted here that the all these codes were initially formulated in the early days of IR in independent India. The requirements of procurement have since increased tremendously over the years to cater to growing traffic on IR. For example in the period from 1950-51 to 2012-13, freight traffic has increased from 44 to 693 billion net ton-km, passenger traffic has increased from 67 to 1098 billion passenger km and procurement expenditure has increased from Rs.1 to Rs.360 billion (Indian Railways 2014). It is thus possible that safeguards envisaged for a low number of procurements are not sufficient today.

Many of the corruption prevention methods recommended in Table 2 have not been incorporated in IR's procurement process. The status of implementation of the methods on IR is discussed below:

(i) Transparency: The transparency of contract opportunities is amply ensured through newspaper advertisements and availability of tender notices/documents on websites of various IR zones. However there is no transparency of processes and decisions- even the details of winning bids are not posted on websites (though CVC guidelines exist (Central Vigilance Commission 2005)). Theoretically however the Right to Information Act 2002 can be applied by stakeholders to access the relevant documents. IR's codes lay down clear rules and regulations, including exceptions to competitive bidding. However, there is no pre-disclosure of the bid evaluation process and no disclosure of reasons for acceptance or rejection of bids.

(ii) Accountability: There is currently no statutory procurement framework and hence transgressions have to be dealt with disciplinary proceedings only. Criminal liability for bribery is covered by the Prevention of Corruption Act 1988, while confiscation of bribery proceeds is covered under the Code of Criminal Procedure (Asian Development Bank & Organisation for Economic Cooperation and Development 2011, 217,224). Penalties for misconduct can range from reduction in rank to imprisonment and hence is substantial.

(iii) Fairness and time bound procurement process: IR's rules and regulations emphasize equal opportunities and equal treatment of suppliers. CVC rules require time bound conduct of procurement process (Central Vigilance Commission 2008).

(iv) Monitoring: The monitoring and oversight agencies are not adequately staffed, as discussed later. There is no information regarding the expertise of their staff or the equipment and financial resources or methodology of monitoring of procurement officials in the public domain. The CVC draws its powers from the Central Vigilance Commission Act 2003, the CBI draws its powers from the Delhi Special Police Establishment Act 1946 and the CAG draws its powers from Articles 148 to 151 of the Constitution of India; thus they do not draw their powers from a comprehensive anti-corruption legislation. The CBI has itself admitted of political control in its investigations (Mahapatra 2013), whilst there have not been any such reports of political control of the CAG or CVC. The CAG and CVC are removed from police control, while CBI is a police organization. There is no report available regarding the corruptibility of personnel of monitoring and oversight agencies except a recent case (DNA India 2013). The internal vigilance officials

are empowered to "gather intelligence from its own sources in whatever manner he deems appropriate about the misconduct/malpractices having been committed or likely to be committed" (Central Vigilance Commission 1991).

(v) Multiple agencies: IR's procurement processes are built such that multiple departments (such as Stores and Finance departments) are involved in all the procurement phases (Nag 2013, 64-67). However, the same agency (for example the Divisional Engineer) may be involved in all the phases of procurement from needs assessment to contract implementation, thus increasing the risk of collusion between the procurement officials and the supplier.

(vi) Grievance Handling: IR does not have any independent grievance handling agency. Aggrieved suppliers can approach the IR authorities for redress. The arbitration panels, constituted in event of contractual disputes in terms of The Arbitration and Conciliation Act 1996, are also manned by IR officials.

(vii) Database: Through individual departments, divisions, zones or production units might maintain databases of supplier price and performance, there is no system in place to consolidate or share the information across IR. Full rollout of the e-procurement system will allow access to last accepted rates (LAR) of a same/similar item across IR along with an audit trail of all activities in a procurement cycle (Aggarwal and Srivastava 2013, 11).

(viii) Procurement Officials: IR's procurement officials are bound by rigorous Railway Service (Conduct) Rules 1966 (Indian Railways n.d.), transgression of which attracts disciplinary proceedings. These rules cover aspects of integrity, devotion to duty, promptness, employment of near relatives in companies enjoying government patronage, acceptance of gifts, engagement in trade, investment in shares or involvement in money lending, insolvency and habitual indebtedness, submission of annual returns of movable, immovable and valuable property, acquisition of immovable property outside India and transactions with foreigners and consumption of intoxicating drinks and drugs. The provision stating that "every railway servant shall at all times do nothing which is unbecoming of a railway servant" is probably intended to cover all instances of transgression not explicitly stated in the rules. IR procurement officials receive training in various training establishments of IR; however the curriculum is not available in public domain and hence the aspect of receiving training in best practices of procurement is not evident.

(ix) Whistle Blowers: The Government of India (through a Resolution on Public Interest Disclosure and Protection of Informer 2004) has authorized the CVC to receive and investigate written complaints from any IR personnel or members of public or non-governmental organizations alleging corruption and misuse of office, with responsibility of CVC to maintain secrecy regarding identity of complainant (Central Vigilance Commission n.d.). The CVC website enables online registration of complaints. Further, contact details of IR vigilance officials are publicly displayed to enable ease of lodging complaints.

(x) Process: The various Railway Board Directorates (especially Civil Engineering, Electrical Engineering, Mechanical Engineering, Traffic Commercial, Works, Stores, Finance, Legal and Vigilance) periodically review the Codes through correction slips. Though there is no specialized procurement oversight body, the Railway Board Directorates advice procuring agencies on IR. All IR contracts for procurement of works and services and goods are required to follow the standard contract document framed by the Railway Board and revised from time to time (Indian Railways 2013, Indian Railways n.d.). E-procurement has been made mandatory by the Government of India for procurement with value above Rs.1 million which can be conducted either through the Central Public Procurement Portal (Government of India 2012) or in-house e-procurement websites such as Indian Railways E-procurement System (Indian Railways n.d.) of IR. (Government of India, Ministry of Finance 2014). IR's e-procurement system, trials for which started in 2005, allows registered suppliers to access and bid for tenders online (with SMS and e-mail alerts for business opportunities) and obtain information of bids received; the online submission allows participation in the tendering process, without fear of intimidation by cartels or anti-social elements (Aggarwal and Srivastava 2013, 11). However no methods appear to be in place in IR for red flagging of deviations of procedures, tracking contract changes or development of performance indicators to monitor process time, price trends and procurement efficiency.

(xi) Suppliers and Contractors: Clause 2500 of the Indian Railways Standard Conditions of Contract executed with supplier of goods, specifies cancellation of order in event of corrupt practices indulged by supplier. Clause 18 of Indian Railways Standard General Conditions of Contract executed with supplier of works and services specifies cancellation of all orders with IR in event of corrupt practices indulged by supplier. Though criminal liability cases can be launched against companies indulging in corrupt practices under the Indian Penal Code, no cases

have been instituted so far (Asian Development Bank & Organisation for Economic Cooperation and Development 2011, 222).

(xii) Civil Society involvement: The civil society engagement can be done through integrity pact mechanism, which was developed by Transparency International. The pact involves all parties in public procurement making a commitment to eschew bribery and disclose all payments to third parties by bidders. The most critical element of integrity pacts is monitoring of the entire procurement process by independent civil society monitors. (Asian Development Bank and Organisation for Economic Cooperation and Development 2008, 189, Transparency International 2013, 11). CVC has recommended implementation of integrity pacts in Central Public Sector Enterprises (CPSE) and defense procurements (Central Vigilance Commission 2007). About 39 CPSEs have adopted integrity pacts (Verma 2010, 10). The implementation of integrity pacts requires civil society involvement through Independent External Monitors (IEM) who is empowered to enquire into protests by bidders regarding the tender evaluation process. A maximum of three IEMs are allowed to be appointed on each CPSE and integrity pacts should cover 90-95% of total value of procurements in an organization according to CVC guidelines (Verma 2010, 12). IR is yet to adopt integrity pacts.

Oversight of IR procurement

Oversight of IR's procurement activities is maintained by both internal agencies (vigilance and finance departments) and external agencies (CVC, CBI, and CAG). The internal vigilance and accounts departments play a complementary role with the CVC, CBI and CAG in providing the set of skills, access and involvement to prevent and detect instances of corruption in procurement.

Oversight bodies such as the CVC or CAG do not have powers of prosecution in criminal courts or powers to take disciplinary action. CVC can only advise IR regarding disciplinary action. The reports of CAG are submitted to the Public Accounts Committee (PAC) of Parliament, which in turn can recommend disciplinary action. Except where criminal proceedings are instituted against IR's personnel by the CBI under the Prevention of Corruption Act 1988 and Code of Criminal Procedure, the IR's top management has been vested with powers to decide the manner of disciplinary proceedings to deal with irregularities reported by oversight bodies such as the CVC or CAG; these powers of IR are again subject to oversight of Parliament since CVC's and

PAC's reports tabled in Parliament lists IR's non-compliances of their recommendations. The final responsibility of oversight is possibly with the Parliament due the fact that correct application of powers vested in IR are dependent on the judiciousness and incorruptibility of IR's top management, as well as the fact that Parliament is the custodian of public money.

Disciplinary proceedings can result in dismissal, removal or reduction in rank; however, "preponderance of probabilities and some material on record are necessary to arrive at the conclusion" (Swarup 2007). Irregularities, wherein the element of "private gain" is difficult to prove, are ideally dealt with by disciplinary proceedings. An irregularity may be committed by an employee willfully for the purpose of "private gain" or otherwise; it also follows that the quantum of punishment should also be in accordance with the intention of the errant employee. It is possibly because of this reason that the powers of disciplinary action has been vested with IR's top management, since an employer would be best able to judge an employee's intentions. (Alexander 1995, 79)'s opinion is that punishments meted out in disciplinary proceedings in India are not "commensurate with their offence" since "procedures involved in such enquiries have become so complicated and dilatory that the protection intended for the honest official has also become the loophole for the corrupt to escape". Again it is quite possible that irregularities which involve financial loss to IR might be viewed more seriously, even though such irregularities might not have happened due to mala fide intentions on part of procurement officials. IR has its own time-bound disciplinary proceeding rules (The Railway Servants (Disciplinary & Appeal) Rules 1968 (Indian Railways n.d.)). However there is neither any comparative study of rate of convictions in disciplinary proceedings in IR and other government departments, nor any information of convictions in disciplinary proceedings in IR in the public domain to arrive at any conclusions in this regard.

Criminal proceedings can result in penal sanctions such as fine and/or imprisonment; however criminal proceedings have to be conducted with due adherence to "technical rules of evidence" and "application of doctrine of proof beyond doubt" (Swarup 2007) in regard to acts of "taking gratification" or "possession of pecuniary resources or property disproportionate to his known sources of income" (as defined in Sections 8 to 13 of Prevention of Corruption Act 1988). Whilst it is not difficult to detect irregularities in public procurement through post facto scrutiny of evidences, it may be difficult to prove an act of "taking gratification" since the perpetrator has to

be apprehended at the exact time of committing the act. Such criminal cases are reported to "take a long time with remarkably low conviction rates: as low as 6 percent" (Vittal 2001, 25). Irregularities can be prosecuted in court of law under provisions of the proposed Public Procurement Bill (Government of India, Ministry of Finance 2012) tabled in the Parliament in 2012, when enacted; once enacted, irregularity in terms of violation of rules framed under this legislation will involve breach of law.

The IR vigilance department and the IR monitoring wings of the CVC, CBI and CAG have less than a thousand employees; on the other hand the IR's stores and user departments have over 14 thousand executives in decision making positions. Further it is physically impossible to cross-check each and every procurement case, numbering about 120 thousand annually (Aggarwal and Srivastava 2013, 1). However, in spite of being out numbered these oversight bodies are able to exercise some degree of control through the element of uncertainty; no one knows which procurement will be taken up for intensive scrutiny by these oversight agencies. If a person is habitually corrupt, the person will definitely come under the scanner of any of the oversight agencies. However if there is also an uncertainty in the corrupt behavior of the person, there is a likelihood that the person may never be apprehended; it is therefore imperative to strengthen procurement processes and incorporate more checks and balances. In this regard, there is no information in the public domain regarding the manner in which a procurement case is taken up for investigation by monitoring and oversight agencies. It is quite possible that the resources of the monitoring and oversight agencies are wasted in the absence of reliable methodology of selection of cases. This might also explain the low conviction rates mentioned earlier.

No measures of effectiveness of oversight mechanisms have yet been devised. However a comparative study of anti-corruption agencies of Singapore(Corrupt Practices Investigation Bureau) , Hong Kong(Independent Commission against Corruption), Thailand(National Counter Corruption Commission), South Korea(Korea Independent Commission Against Corruption), and India(the CBI) found that countries such as Singapore and Hong Kong with low Transparency International's corruption perception rankings (low rankings imply low perception of corruption) had budget per anti-corruption agency personnel nearly 6 to 43 times that of CBI and anti-corruption agency personnel per population ratio nearly 4 to 39 times that of CBI (Quah' 2008, 18). This aspect has been echoed by (Palmier 1985, 113) : "The Central Vigilance

Commission and the Central Bureau of Investigation appear to have been given just enough powers and resources to permit some activity, but not enough to make them effective".

3. Case Studies

In this section, we examine a few recent cases of irregularities in the procurement process recorded by oversight bodies to seek appropriate corruption methods that can be adopted to avoid the recurrence of deficiencies in IR's procurement processes and control mechanisms. Thus both the research questions are addressed simultaneously. The theoretical framework discussed in Section 1 is used to seek appropriate corruption methods. The cases discussed below pertain to phases III & IV of Transparency International's framework of Table I. The author did not come across any recent case pertaining to the other phases of procurement, contrary to the opinions of CVC and CBI officials. (Tabish and Jha 2011, 272, Singh 1999, 183).

It will be seen in all the cases that there have been failings of the TAA/TC (Cases A, B, C and D) or contract implementation officials (Cases E, F and G). Provision for "substantial penalties for misconduct" (Asian Development Bank and Organisation for Economic Cooperation and Development 2008, 51) along with adequate monitoring are likely to deter such failings.

3.1 Phase III: Contractor selection and award phase

Firms submit bids for procurement tenders, which are valid over a certain period of time only. Bid evaluation is done by a tender committee (TC) comprising of officials of different departments. The TC can recommend acceptance or rejection of offers or negotiations with the lowest bidder. The recommendations of the TC are examined by the Tender Acceptance Authority (TAA), who is vested with powers to accept, reject or amend the recommendations of the TC. The decision of the TAA leads to acceptance or rejection of bid offers and the award of contract. It is the responsibility of the TC and the TAA to evaluate and decide the bid offers within the validity period. There is presently no institutional mechanism to monitor the decisions of the TC/TAA on a regular basis.

Firms are at liberty to refuse extension of the period of validity of the bid offer. Negotiations cannot be held with a firm after expiry of its period of validity of offer. Neither can a contract be awarded to a firm after the expiry of its period of validity of offer.

It is permissible under IR's procurement rules to split the quantity under procurement between two or more firms. This is done under circumstances where the TC/TAA is of the opinion that a single firm will not be able to deliver the entire quantity under procurement due to its capacity constraint or the firm's quality/performance is yet to be validated. Under such circumstances, firms are usually requested to supply at the lowest bid offer; firms are at liberty not to agree to the request.

3.1.1 Case A Facts: A tender T1 was called for various items of work involved in the construction of a road over bridge (ROB), for which only one offer was received. The TC recommended negotiations with the sole bidder in view of rates being quoted being higher than last accepted rates. The TAA accepted the TC's recommendations for negotiations, following which a round of negotiations was held with the sole bidder. The TC considered the negotiated rates and recommended for acceptance of the negotiated rates. The TAA accepted the recommendations of the TC. However, 5 days later the TAA amended his acceptance to delete an item pertaining to earthwork, without recording reasons for the same. The negotiated rate for earthwork was Rs.110 per cu.m. and the total earthwork involved in tender T1 was 20,000 cu.m. Another tender T2 was called by the same office a month later for various items of work involved in the construction of two ROB's located 3 km away from the ROB of tender T1. A major component of tender T2 was earthwork of 80,000 cu.m. Again only one offer was received, which was from the contractor of tender T1. The TC examined the offer and recommended calling for fresh tenders after discharging the tender T2. The TC justified its recommendations citing that rates quoted were higher by 45% over the estimated cost and re-tendering is likely to yield lower rates as rates had fallen recently. The TAA (same person as TAA of tender T1) rejected the unanimous recommendation of TC to re-tender and decided to give a counter offer of Rs.130 per cu.m. The contract was awarded using the counter offer rates.

The TAA was taken up for departmental action by IR internal vigilance for giving a counter offer in T2 at a higher rate than that accepted (and later deleted) in T1, without giving any satisfactory reasoning. (Railway Board 2011)

Case A Discussion: This case was detected by IR's internal vigilance. The TAA considered the rate of Rs.130 per cu.m. as reasonable and justified for award of contract in the tender T2, whereas the same TAA did not consider the rate of Rs.110 per cu.m. as reasonable in the tender T1 pertaining to the same work and nearly the same location. It is quite likely that the deleted

earthwork of T1 would be re-tendered at a later date by the TAA and contract awarded at a rate of Rs. 130 per cu.m. causing a loss of public money amounting to Rs.2 million for the total quantity of 100,000 cu.m. of both the tenders T1 and T2.

It is apparent that the TAA did not cause of loss of public money through a careless action. Rather there is an element of deliberate action by the TAA in ignoring TC's recommendations in both the procurement cases. Further the TAA reversed his own decision after 5 days of accepting TC's recommendations in tender T1. Though this appears to be a case of corruption on part of the TAA, even though the element of "private gain" is not visible. This case highlights the distinction between irregularities and corruption and the importance of detecting irregularities in preventing corruption.

IR's procurement processes could not detect these irregularities before it was detected by oversight bodies. Red flags should have been raised when (a) a TAA reverses the decision of the TC, (b) TAA changes his own decision, as in the case of T1, (c) rate of Rs.130 per cu.m. accepted when there existed an earlier offer of Rs.110 per cu.m. Further, these red flags should be taken seriously, especially in processes where a single person or agency is involved. These red flags could be raised by (a) members of public and civil society had the entire procurement process been transparent (b) either members of TC or TAA's staff through whistle blower encouragement and protection mechanisms, with which the staff are either not familiar or do not have confidence in the protection mechanisms or are in collusion with the TAA or (c) a information system which records all bid transactions including details of bids received, validity of bid offers, last accepted rates for similar works/goods, approved suppliers for the goods/works/services, recommendations of TC, decision of TAA, supply performance of the contractor, post-contract warranty failures etc-such a information system can be programmed to raise exceptions whenever a TAA changes the decision, or a TAA disagrees with the recommendations of the TC tender is discharged or higher rate is accepted. Such red flag mechanisms can be immediately checked by superior authorities and corrective action if required can immediately be taken. These red flag mechanisms are also very useful for selecting cases for investigation by the monitoring agencies and oversight bodies which are short staffed. Such an information system can be built around the e-procurement platform being rolled out across IR.

3.1.2 Case B Facts: In March 2009, the Board floated a tender inviting bids from RDSO approved sources for supply of 44 items of steel sheets/plates of different specifications

comprising of 59,138 tons of Corrosion Resistant Steel Sheets and Plates and 136,954 tons of mild steel sheets and plates for meeting the requirement of zones, manufacturing units and wagon fabrication units. Firm F1 had bid lowest in 35 items out of the 44 items tendered. The bids of F1 were lower by 14% in respect to LAR for 13 items, against the expected reduction of 18% due to fall in wholesale price index for iron and steel. A reduction of 18% vs reduction of 14% for the 13 items implied a difference of Rs.120 million. TC therefore recommended for negotiation for those 13 items, which was approved by the TAA in July 2009. However during the negotiations, F1 declined to revise their bid and also expressed the inability to extend the validity of their offer beyond 24 August 2009.

The TC met again to review the negotiation bids only after 24 August 2009. Since the offer of F1 had lapsed, TC considered following two options:

I. Calling another tender for the 35 items for which F1 was the lowest bidder and placing orders for remaining 9 items on lowest bidders

II. Considering the next higher bidder for placement of orders for all 44 items

TC recommended Option II, apprehending that retendering might result in escalation of offers. The TAA did not agree with the recommendation of the TC and approved Option I in November 2009. The remaining material was subsequently procured at much higher rates in the subsequent tender, resulting in an additional expenditure of Rs.530 million.

Board did not agree with the CAG's contention, in that there were flaws in the decisions of the TC or TAA. The board argued that had negotiations with F1 been successful and had F1 extended the validity of its offer, there would have been a reduction of Rs.120 million in total expenditure. The Board argued that neither the TC nor the TAA could have predicted that the drastic change in market conditions in a year's time. (Comptroller and Auditor General of India 2011)

Case B Discussion: This case was detected by CAG. The TC recommended negotiations, since there was a possibility of saving Rs.120 million in respect to the 35 items. The TAA accepted the recommendations for negotiations. However the firm's period of validity of offer had expired, which it declined to extend. This situation should not have occurred since it is the responsibility of the TC and the TAA to complete the evaluation process within the period of validity of offers. An information system could have reminded the TC and the TAA about approaching deadlines, as well as raised flags for supervisory authorities to urge expediting the evaluation process.

Further, such situations may be avoided through adequate training of the procurement officials in regard to pitfalls in the procurement process.

The TC then suggested two options. The first option was to call a fresh tender for these 35 items. The second option was to place order for these 35 items on the next highest bidder. The TAA took a correct decision in accepting the first option. If the TAA had decided to accept the second option, questions would have been raised considering the hypothetical possibility of obtaining a better deal in a fresh tender. However a fresh tender resulted in additional expenditure of Rs.530 million, instead of obtaining a better deal. This case highlights the difficulty in assessment of wrongdoing in cases of irregularities. It is obvious that the TC and TAA have been at fault for not completing the procurement process within the validity period of the offer of F1, which has resulted in the loss of Rs.530 million.

3.1.3 Case C Facts: In March 2008, the Board floated a tender, inviting bids from RDSO approved sources, for procurement of 172,741 tons of mild steel sheets and plates and 66,364 tons of Corrosion Resistant Steel Sheets and Plates for meeting the requirement of zones, manufacturing units and wagon fabrication units. Six firms submitted their bids for the tender.

Firms F1 and F2 were the lowest and the next-lowest bidders for all the five items of mild steel sheets and plates. The TC recommended that order for half of the tendered quantity of mild steel sheets and plates be placed on F1 at rates quoted by F1, and order for the remaining half be placed on F2 at rates quoted by F2. The reasoning given by the TC for not placing the order for entire quantity of mild steel sheets and plates with F1, was that F1 had a capacity constraint and their supply performance was not satisfactory.

Scrutiny of records by CAG revealed that the supply performance of F1 during the years 2006-07 and 2007-08, was 95% and 100% respectively. Further, CAG observed that a counter offer should have been given to F2 to supply the mild steel sheets and plates at rates quoted by F1; such a counter offer would have resulted in savings of Rs.120 million.

The Board in its counter argument stated that the firm F1 was yet to supply 22% of the total ordered quantity against an earlier purchase order, when the recommendation was made by TC. Board further argued that counter offer to F2 was not made either due to reluctance of the firm to reduce their quoted rate or non-availability of lower technically suitable offer. (Comptroller and Auditor General of India 2011)

Case C Discussion: This case was detected by CAG. In this case splitting of order has been recommended by the TC on basis of the fact that the delivery performance of the lowest bidder F1 has been unsatisfactory. Further, given the fact that F2 did not agree to supply the quantity at F1's offer, the order was placed for the remaining quantity on F2 at F2's offer which was higher than that of F1. The issue of interest here is the additional expenditure of Rs.120 million on account of splitting and refusal of F2 to supply at F1's offer. IR's rules do not require that counter-offer is required to be sought from F2 (Indian Railways 1990, Sec.344) and there is no irregularity in following rules. However it can be argued that there could be an element of collusion between the TC/TAA and F2 which has resulted in an irregularity due to higher costs incurred in procurement by IR. This case also highlights the difficulty in assessment of wrongdoing in cases of irregularities. The other option available to the TC/TAA was to float a fresh tender for the remaining quantity. This however carried a risk, in case the lowest bids obtained were even higher than that of F2's offer (as the situation in case B). In addition, further time would be required for placing the order resulting in delay in receipt of materials and consequent hampering of operations and production. The TC/TAA could have taken this decision in the best interests of the organization.

The oversight body's contention is that the delivery performance of F1 had been satisfactory, whereas the TC recorded that the supply performance of F1 was not satisfactory. IR has countered this contention on grounds that delivery performance of F1 was not satisfactory at the time of TC's recommendations. Given this dispute and the amount of Rs.120 million involved, there could be a perception that the TC/TAA has manipulated or drawn wrong conclusions from delivery performance records. However it seems extremely remote that the TC and TAA would all be involved in such a manipulation, given that they belong to three different departments. Such a situation could again be avoided if IR's procurement process is built around a database containing information on supplier price and performance. Such a database should be preferably be maintained by an IR agency different from the procurement bodies (such as CRIS (Centre for Railway Information Systems 2014) which already maintains the e-procurement system and ticket reservation system of IR) which makes it transparent and incapable of any manipulation to build trust of the stakeholders in the fairness of the procurement process. Further, such situations may be avoided through adequate training of the procurement officials in regard to pitfalls in the procurement process.

3.1.4 Case D Facts: As per extant instructions on IR, purchase preference for products and services has to be granted to the Central Public Sector Enterprises (CPSEs) at the lowest valid price bid if the price quoted by a CPSE was within 10% of the lowest valid price bid. A tender was invited in December 2003 with the provision of purchase preference for execution of earth work for construction of fourth line between Tikiapara and Santragachi. F1, bidding at Rs.111.1 million was the lowest bidder. The second lowest offer of Rs.123 million (10.7% higher than F1) was received from F2, which is a CPSE. At the instance of TC, F2 agreed to lower their bid to Rs.111.1 million. TC then recommended award of the work to F2 in April 2004. The recommendation of the TC was accepted and work awarded to F2 with completion date of 12 October 2005.

However F2 could not complete the work even after extension of completion time to July 2006 and the contract was terminated in August 2006 at 'risk and cost'. The work executed by F2 till the termination of the contract was valued at Rs.23.4 million. The balance work was subsequently awarded to another contractor F3 in March 2007 at a cost of Rs.144.5million.

CAG opined that the price preference clause had been incorrectly applied to F2 since its offer was 10.7% higher than F1. Further the TC or the TAA failed to take into account the poor performance record of F2 in finalizing the tender.

The Railways countered that F2's negotiated rates made it eligible for application of price preference clause and F2's bid could not be ignored. (Comptroller and Auditor General of India 2010)

Case D Discussion: This case was detected by CAG. According to IR's procurement rules, price preference to CPSE are to given if its offer is within 10% of the lowest offer. However F2's offer was 10.7% higher than that of the lowest bid. The TC negotiated with F2 to reduce its offer to that of the lowest offer, and then recommended that the contract be awarded to F2. The subsequent failure of F2 resulted in the work being done at an additional cost of Rs.56.8 million, which would have recovered from F2. The completion of the work was also delayed by nearly two years. Had the work been awarded to F1, the work would have been probably completed in time, without the additional administrative cost of contract termination and re-tendering. The absence of an independent grievance redress mechanism would probably have encouraged F1 to contest the decision of award of contract to F2, and thereby avoiding such a situation. F1 could also have approached the IEM in the event of the tender being covered by an integrity pact.

According to CVC guidelines, negotiations can be conducted by the TC only with the lowest bidder after negotiations are approved by the TAA. In this case, the TC negotiated with the second lowest bidder. This irregularity would probably not have been noticed by the oversight body had F2 completed the work within time. Transparency of tender decisions would probably have enabled the public or civil society to notice this irregularity and seek rectification. This situation would have been avoided if this had been red flagged by a information system in time, which could alert supervisor authorities of three irregularities being committed: (i) conducting negotiations with the second lowest bidder (ii) incorrect price preference being given to the CPSE (iii) poor performance record of F2 being ignored. Such situations may be avoided through adequate training of the procurement officials in regard to pitfalls in the procurement process. Further a proper database of supplier performance would have probably highlighted the poor performance record of F2 to the TC/TAA.

The actions of TC/TAA are an irregularity since rules have been violated as well as IR's interests in terms of performance and costs have been compromised. The TC's action of negotiation with the second lowest bidder would have seemed suspicious, if F2 not had been another government body. This case also highlights the difficulty in assessment of wrongdoing in cases of irregularities.

3.2 Contract Implementation Phase

This is an extremely important part of the procurement process. The supplier stands to gain enormously if goods or works are supplied at quality or performance norms below that which is contracted. Thus there is a substantial motivation on part of the supplier to compromise the inspection process. The risk is exacerbated in situations where the bid evaluator is also the person inspecting the goods and works.

Whilst the responsibility of inspection of IR's procured goods is entrusted to an external agency (RITES (RITES n.d.)) to obviate the possibility of collusion of public official with the supplier to accept goods below acceptable quality, the responsibility of inspection of IR's procured works lies with the user department. IR's procurement of works/services, which constitute the bulk of its procurements, thus carries an enormous risk of corruption since the user department is involved in both the bid evaluation and inspection. IR has chosen to mitigate this risk through a process of sample checking at two levels, to obviate the possibility of collusion.

The (World Bank 2003, 19) has observed in this regard that “Supervision of contract performance can be influenced for a consideration. In public works contracting, corrupt payments for timely and sympathetic inspection and for timely payments have been a well-established tradition for decades. Both the officials and the contractors, who were interviewed, confirm to its prevalence; but while the officials believe that it does not exceed 5% of the contract price, the contractors assert that the amount may be as much as 15% to cover all branches of the government (tax, customs, excise, etc., besides the engineering), and is built into the price. The corruption in the States is more widespread than in the center, and some States are worse than others. No state or central agency or state enterprise is exempt”.

3.2.1 Case E Facts: Rolling Shutter is used in the manufacture of passenger coaches. A consignment of Rolling Shutter was ordered by Integral Coach Factory (ICF). The consignment was inspected by RITES and sent to ICF after being certified as conforming to specifications by the RITES Inspection Engineer.

On arrival of the consignment at ICF, the IR internal vigilance carried out measurements and found that the thicknesses of the guide channels were not conforming to the specifications. IR internal vigilance then carried out a detailed inspection in presence of representatives of the manufacturing firm, RITES and ICF, which confirmed the earlier findings. The concerned RITES Inspection Engineer has been taken up for departmental action. (Integral Coach Factory 2010)

Case E Discussion: This case was detected by IR's internal vigilance. In this case, we find that the external agency has compromised its primary function of inspection and colluded with the supplier. This case illustrates that though multiple agencies have been provided in the procurement process, it does not guarantee that procurement is free from irregularities and corruption; it is therefore necessary to have a comprehensive set of anti-corruption measures. The only ways of preventing such instances are (i) encouragement to whistle blowers within the external agency (ii) impose sanctions against the supplier concerned. This case of irregularity does not pose difficulty in assessment of wrongdoing.

3.2.2 Case F Facts: A contract was awarded for replacing and laying 600.4 m of cast iron pipeline of 250 mm diameter and 300.25 m of cast iron pipeline of 200 mm diameter. After completion of work by the contractor CI, the length of replaced and re-laid pipeline was measured and recorded by a senior supervisor SI and recorded as compliant with contract scope

of work. A sample measurement for 20% of the contracted length was carried out by the next higher supervisor S2, followed by another sample measurement of 5% of contracted length by the next higher supervisor S3 and found to be in order. Payment was made to the contractor for the entire scope of work by the accounts department on basis of three records of measurements.

The IR internal vigilance carried out a preliminary inspection of the replaced and re-laid pipeline at a later date and found that only 226.7 m of 250 mm diameter and 106.75 m of 200 mm diameter pipeline had been replaced and laid. The case was handed over by the IR internal vigilance to CBI, which conducted further investigations. CBI's investigations revealed that the measurements by S1 and S2 were incorrect; the measurement by S3 was correct, since new pipes were laid in the locations checked by S3.

S1 and S2 have been taken up for prosecution by CBI under Prevention of Corruption Act 1988. S3 has been reprimanded after departmental proceedings initiated by IR internal vigilance. (East Coast Railway 2010)

3.2.3 Case G Facts: According to the contract for construction of an office building, ordinary Portland cement (OPC) conforming to IS-8112-1989 was required to be used.

The IR internal vigilance while carrying out a preventive check at the construction site found 500 empty cement bags. The concerned railway site supervisor informed that the cement bags pertained to cement used in the construction work. The markings on the cement bag showed that the cement was Portland-Pozollana cement (PPC) conforming to IS-1489. PPC is much cheaper than OPC. The concerned railway site supervisor has been taken up for departmental action. (East Coast Railway 2010)

Cases F and G Discussion: These cases were detected by IR's internal vigilance. It is observed in Case F, that S1 and S2 have colluded with the supplier. This has probably been facilitated by the fact that both belong to the same department. In the Case G, the site supervisor was either negligent in his duties or was in collusion with the supplier in using cheaper cement.

It is quite possible that in both the cases, the official involved in the contractor selection and award phase is also involved in the contract implementation phase. These corruption instances can possibly be avoided by (i) insisting that the same official cannot be involved in all the phases of the procurement process to reduce probabilities of collusion with contractor (ii) whistleblowers within the department, provided mechanisms for whistleblower protection are strengthened (iii) impose sanctions against the suppliers/contractor concerned (iv) entering into

integrity pacts with the suppliers/contractors. These cases of irregularity do not pose difficulty in assessment of wrongdoing.

4. Case Analysis

It is found that risks (a) and (b) of phase III and (a) and (e) of phase IV, as indicated in Table 1, are manifested in the cases analyzed. The corruption prevention method(s) which may have prevented the irregularity for each case is given by a '●' symbol in Table 4.

Table 4: Summary of cases and their prevention methodologies

Sl.No.	Phase of Procurement Methods of Prevention of Public Procurement Corruption & Irregularity	III			IV		
		Cases					
		A	B	C	D	E	F/G
1	Adequate Transparency	●			●		
2	Adequate Accountability	●	●	●	●	●	●
3	Fairness & time bound procurement process		●				
4	Adequate Monitoring & oversight	●	●	●	●	●	●
5	Multiple agencies						●
6	Grievance Handling				●		
7	Database			●	●		
8	Procurement Officials code, salaries, training		●	●	●		
9	Whistle Blower mechanisms	●				●	●
10	Adequate Procurement Process	●	●		●		
11	Adequate provisions for sanctions against Suppliers and Contractors					●	●
12	Civil Society involvement				●		●

It will be observed that variables such adequate accountability, adequate monitoring and oversight, training of procurement officials, whistle blower mechanisms and information systems as part of the procurement process are predominant factors in most of the cases. Accountability can be strengthened either by conscious policy decisions to increase the cost of misconduct through stringent and exemplary punishments. Monitoring and oversight can be strengthened through better staffing and adequate provision of resources to the agencies. Whistle blower mechanisms can be strengthened through enactment of statutory protection systems, along with wide publicity of provisions of the whistle blower mechanisms among the public. Introduction of information systems which can turn out exception reports will help both the supervisory authorities as well as the oversight agencies in selection of cases for investigation. Case E also demonstrates that a comprehensive set of measures must be adopted, rather than relying on only a single method of combating corruption.

It is observed that the above findings do not entirely agree with the opinions of CVC experts wherein the following issues were ranked as most important for curbing corruption in public procurement in the order stated: (i) transparency (ii) professional capabilities of procurement officials (iii) proper contract monitoring and (iv) monitoring of compliance with procedures (Tabish and Jha 2011, 272). The difference in findings might be the result of limitations of this study. The major limitations are the paucity of wide range of cases, absence of complete details of the cases and absence of cases involving other public organization in the public domain; the last aspect makes it difficult to generalize the findings across all public sector organizations in India.

However this exploratory study of determination of efficacy of different methods of prevention of corruption in public procurement , is in an area yet in academic infancy, given that there are very few studies in the area especially in the Indian context. The paper has identified the need for research in this area. It has also set the theoretical framework and context for an under researched area.

This study focused on cases of irregularities in procurement. Further research is required in understanding the effective methods of prevention of corruption, considering cases of proven corruption in procurement.

It is possible that many other cases of corruption go undetected in other phases of procurement, since bidders do not report irregularities; this has been noted by (World Bank 2003) : “The main stakeholders in the process who need fair treatment are the bidders/competitors. This category of people being in business, are not inclined towards establishing their rights because whether they get the tender or not, they will have to deal with the authorities for business/support and payment. So they are not in a position to insist upon transparency”. Further research is required to determine the modus operandi of corruption in phases I and II, their methods of detection and remedies.

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