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QUALITATIVE ANALYSIS ON CAUSATIVE INDICATORS OF CORRUPTION IN INFRASTRUCTURE PROCUREMENT (IP) OF DEVELOPING COUNTRIES

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ABSTRACT

The formation of an effective anti-corruption mechanism is dependent on the identification of corruption causes. Various studies have been conducted to understand the mechanism and causative indicators of corruption in the infrastructure sector to combat this ailment. However, there is a lack of research in developing countries. Therefore, this study examines the causes of corruption in infrastructure procurement in Pakistan. A two-step methodology was adopted-in step one, a thorough literature review of 43 articles was conducted, and 39 corruption causes were identified as a result. The identified corruption causes were grouped into five primary constructs – individual and social causes, project nature causes, regulatory causes, political causes and organisational causes. In step two, 34, semi-structured interviews were conducted with industry practitioners of infrastructure projects in Pakistan. The findings suggest that the most common corruption causes are regulatory, project nature and political causes. This study is a valuable addition to the current literature on corruption research. It provides deeper insight into causal indicators of corruption in infrastructure procurement in Pakistan. The findings provide useful information to anti-corruption agencies, policymakers and industry practitioners for making anti-corruption strategies.

INTRODUCTION

Corruption is an "abuse of power" (Blackburn & Sarmah, 2008), misuse of authority and resources in the infrastructure sector (Sohail & Cavill, 2008). The dilemma of persistent corruption has given birth to corruption perception indexes, international transparency reports, and international barometer of corruption. These are tools to indicate its uprising trends in various countries around the globe and place some accountability on the governments governing them (Bowen et al., 2012.). Nevertheless, the issue is uprising and obstinate in developing and developed countries. Even though developed nations came up with some effective remedies, the developing countries are still on a quest to find the holy grail to combat corruption (Ayat et al., 2021). Pakistan is one nation struggling with persistent corruption in its infrastructure sector (Khattak & Mustafa, 2019). The upward increase in corruption and the resulting downward trend in economic growth is worrisome and needs immediate attention.

Infrastructure procurement (IP) is considered most prone to corruption because the process of procurement and methods of procurement are technical and confusing (Jain, 2001). Thus, allowing the

corrupts to take unfair advantages at the cost of project quality, scope and budget (Stanbury,2009). Corruption exists in various forms in IP: bribes, fraud, embezzlement, influence peddling, ghost companies, discrimination, bid rigging, favouritism are a few examples (Bowen et al. 2012; Le et al. 2014; Shan et al. 2016). The few more forms not given enough attention in literature but are present in infrastructure projects of Pakistan are; revolving door, renegotiations, distorted spending structure, indirect political expenditure, image building and lobbying (Salant 1995; Mausio 2007.; Straub 2015; Sanger 2017; Daniel et al., 2019; Sud 2020). These forms exist due to causative factors which needs attention while designing the policies and measures to combat corruption (Sumah,2018). Although many preceding studies have identified causes of corruption in the infrastructure sector in the case of Pakistan, no in-depth study has been conducted to date. Therefore, this paper aimed to conduct a systematic study of literature to consolidate the causes of corruption and identify the causes most relevant to the infrastructure sector of Pakistan by carrying out 34 semi-structured interviews from industry practitioners working in this sector for more than five years.

The following section provides the theoretical underpinning of corruption causes in the infrastructure sector. We then explain the two-step methodology adopted in detail, the first step consists of an in-depth literature review of 43 articles published regarding corruption causes in the infrastructure sector, and the second step consists of data collection through semi-structured interviews. The reason for adopting this methodology is to design an instrument to measure and rank the causes of corruption in infrastructure procurement. Finally, findings are discussed along with the conclusion and recommendations for future work.

Overview of Corruption Causes in Literature

Infrastructure procurement is most vulnerable to corruption (Owusu et al., 2019). The previous literature on corruption in infrastructure procurement indicates numerous causative factors that seed illegal acts. The study conducted by Bardhan and Mookherjee (2006) advocates that when an incentive is more rewarding than the punishment, corruption is bound to exist. This approach and other similar literature on corruption causes in IP suggest three things to be present for corruption to occur in the procurement process (Shah, Ganiyu & Zhu, 2022; Aidt 2011; Osei-Tutu, Badu & Owusu-Manu 2010; Jain 2001; Rose-Ackerman 1999; Tanzi 1998) i.e.

1. Presence of Power: the higher officials' authorities are involved in the policymaking and decision making of the procurement process and have the power to alter and change the decisions without being answerable to any other being.

2. Power to Use Economic Resources: the officials are not answerable for keeping records right. They have complete discretion to use and allocate funds as per their own choice.

3. Weak Regulatory Authority: The officials are free to be involved in corrupt practices as overlooking bodies are weak in legal frameworks or are involved in such practices. Given the power of position at such high-level jobs in government institutions, individuals have the power to extract the funds without any fear of getting caught or punished.

The first two causes give an idea about the benefits of corruption, and the third one gives the cost perspective. These approaches help understand the corruption causes in developing countries as well. In lieu, in 2008, UNDP presented a formula for corruption for developing countries to measure corruption i.e.

C (corruption) = M (monopoly) + D (discretion) - A (accountability) - I (integrity) – T (transparency)

The formula to measure corruption suggests that monopoly and discretion provide the freedom to officials to abuse their powers (Tabish & Jha, 2012). However, accountability, integrity, and transparency can help as countermeasures (Bowen et al., 2012). In the case of Pakistan, due to no transparency, no accountability and the weak rule of law, corruption is blooming (Khan et al., 2019). It is common to exploit the complexity of the procurement process by creating false requirements for the project, where no governance framework is exercised (Shihata, 1997). In addition, operational mechanisms and the nature of infrastructure projects encourage corrupt practices (Transparency International, 2006).

METHODOLOGY

Section 1: Instrument Design

There is more to the causes of corruption than weak regulation systems and the presence of power to abuse economic resources. A thorough literature review of 43 publications was conducted to understand the causes of corruption in infrastructure projects. A series of steps identified these articles; first of all, renowned journals like IJPM, Journal of construction management, PMJ, Journal of Management Studies, and Corporate Governance were selected based on Chau's ranking (2017). Few other journals like Jordan Journal of Civil Engineering, Engineering, Construction and Architectural Management, Journal of management in engineering, Journal of public administration and policy research &Construction Management and Economics; conference papers, world bank and OECD reports were also included. The articles were searched using keywords; causes of corruption, corruption in infrastructure projects, causes of corruption in infrastructure procurement. This exercise resulted in 150 papers altogether. These 150 papers were scrutinized with great care; the papers unrelated to the infrastructure industry or not identifying causes of corruption were discarded based on irrelevancy. In the end, 43 publications were left, presenting corruption causes in infrastructure project procurement. The identified corruption causes and their frequency of occurrence is presented in table 1.

Previous studies conducted by Owusu et al. (2019), Zhang et al. (2017), Le et al. (2014a, b), Tabish and Jha (2011) and Zou (2006) identified numerous causes of corruption in infrastructure projects. The most detailed study conducted in this regard was by Owusu et al. (2019) and Zhang et al. (2017), which identified 44 and 24 causes. Further, Le. et al. (2014a, b) presented ten corruption causes in the Chinese public construction sector in two constructs; flawed regulatory system and lack of positive industrial climate. Zhang et al. (2017) and Owusu et al. (2019) presented the identified causes in six primary constructs: project-specific causes, regulatory specific causes, organisational specific causes, psychology specific causes. This study identified 39 causes (table 1) of corruption grouped into five primary constructs following the same approach.

Table 1 depicts that the most identified corruption cause in literature is low ethical standards with a frequency of 19. This cause has been identified as the most common corruption cause by studies conducted by Owusu et al. (2019) and Zhang et al. (2017) and also by recent studies (Sumah, 2018; Zulu & Muleya, 2019; Owusu et al., 2021). The thorough review helped us formulate these causes in five primary constructs corruption causes, regulatory causes, political causes, individual & social causes, project nature causes, organisational nature causes. The

corruption causes are grouped in each construct based on their proximity to each other after an in-depth review of selected articles and understanding developed by the author. For example, according to literature, low ethical standards, close relationships, corrupt role models, and greed are in the construct of social & individual causes as these are traits of corrupt individuals.

	Causes of Corruption	References
19	Low ethical standards	[1],[2],[3],[4],[5],[6],[7],[8],[9],[10];[11],[12],[13], [14],[15],[16],[17],[18],[19]
18	Close relationships/close knitted networks	[1],[8], [12],[13], [14],[16],[19], [20], [21], [22],[23],[24], [25],[26], [27], [28], ,[29],[41]
12	Poor regulation system	[8],[9], [11],[19], [14],[16], [27],[29],[33], [38],[40],[41]
10	Poor working conditions	[8],[11];[12] [14],[19], [27],[30],[38],[39],[40]
10	Inadequate legal rules	[8],[12],[19],[14],[25],[30],[33],[37],[38],[39]
8	Lack of supervision	[8],[9], [14],[19][27],[31],[35],[37]
8	Corrupt role models	[1],[8]; [9], [14],[19],[27],[38],[40]
8	greed	[8],[9],[11], [14],[19],[27],[28],[35]
6	Complex nature of infrastructure projects	[8],[10]; [14],[29],[35],[39]
6	Competitive tendering process	[9],[11]; [14],[16],[29],[36]
6	Low wages	[8], [12] [14],[19],[40],[43]
4	Negative encouragement	[11], [14],[16], [29]
4	Numerous permits and licenses	[8],[14],[27],[37]
4	Influence of Government	[10], [14],[17],[35]
4	Bad economic conditions	[11],[12], [14],[28]

4	Competition within organization	[8], [11],[16], [29]
3	Political interference and influence	[8],[12],[17]
3	monopoly	[14],[19],[31]
3	8ikmWeak procurement structures	[11], [14],[35]
3	Lack of punishment and penalties	[14],[30],[35]
3	Concealment of corruption	[10],11],[14]
3	Complex contracts	[10],[14],[19]
3	Representative appointment to secure contracts	[10],[14],[40]
2	Lack of efficient administration	[14],[37]
2	Lack of control mechanisms	[14],[35]
2	Political changes	[9],[12]
2	Non transparency in selection process	[14],[36]
2	Delayed salaries	[14],[34]
2	lack of legal awareness	[14],[42]
2	Lack of communication in government departments	[14],[42]
2	Poor documentation	[14],[42]
2	Complex organisational rules and functions	[14],[36]
2	Lack of communication	[14],[36]

	within organisational departments		
2	Lack of standardized project practices	[14],[39]	
2	guanxi	[11], [14]	
2	Lack of anti-corruption mechanism	[19]; [14]	
2	Job insecurity	[14],[34]	
2	Focus on personal interest rather than public interest	[14];[17],[32]	
2	Deregulation in public construction projects	[14],[31]	
2	Multiple certification requirement	[14],[30]	

Table 1: Causes of Corruption

1= Damit (1983); 2= Zarkada-Fraser and Skitmore (2000); 3= Liu et al. (2004); 4= Moodley et al.(2008); 5=King et al.(2008) ;6= Hartley (2009); 7= Fan and Fox (2009) 8=; Le et al. (2014a, b); 9=Shan et al.(2016a); 10=Locatelli et al. (2016); 11=Zhang et al.(2017); 12=Sumah 2018; 13=Campos et al. (2019);14= Owusu et al. (2019); 15=Ebekozien (2019) ;16= Zulu and Muleya (2019); 17= Ebekozien (2020);18= Yap et al. (2020) 19= Tanzi (1998) ; 20= Chan et al.(2003); 21= Dore´e (2004); 22= Yow Thim and Zonggui (2004);23 = De Jong et al.(2009); 24= Ling and Tran. (2012) ;25= Ning (2014);26= Ling et al. (2014) ; 27= Brown and Loosemore (2015); 28= brahim et Al. (2019); 29= Yap et al. (2020);30= Stansbury 2009; 31= Gunduz and O¨ nder (2013);32= Porter (1993; 33= Zhang (2005);34= Alutu (2007);35= Bologna and Del Nord (2000);36= Sohail and Cavill (2008); 37= Stuckenbruck and Zomorrodian (1987), 38= Bowen et al. (2012);39= Tabish and Jha (2011);39= Krishnan (2009);40= Hartley (2009);41= King et al (2008);42= Iyer and Sagheer (2009);43= Boyd and Padilla(2009)

Likewise, in literature, lack of supervision, poor regulation system and lack of efficient administration is related to regulatory corruption causes. A detailed figure 1 represents the corruption causes and their respective constructs causes. Each construct is explained briefly below to understand the causes of corruption better.

Explanation of Constructs

1.   Individual and Social Causes

This construct includes causes related to individual characteristics and the social environment, which influence the thinking and behaviour of individuals. It includes causes like low ethical standards, close relationships, corrupt role models, greed, negative encouragement and guanxi (Tanzi 1998; Wang et al., 2000; Moodley et al. 2008; Bowen et al. 2012; Le et al.

2014a, b; Brown & Loosemore 2015; Shan et al. 2016a).

Gaining a few more bucks is enticing when moral and ethical training is absent (Cavill & Sohail, 2008). In terms of Pakistan, ethical training is intertwined with religious beliefs; individuals are expected to behave ethically correct based on the teachings of Islam (Islam and Siwar, 2013). However, otherwise, no formal ethical training is provided (Er, 2008). Hence people with low ethical standards are more likely to engage in corruption. Taking a small number of bribes is not considered a big sin where ethics is not given enough importance (Tarip,2020). The literature also points to the influence of social networks over close relationships and expectations associated with its members as corruption causes (Binions, 2019). The psychological studies accentuate on importance of social networks and humans' instinct to behave expectedly to prove their loyalty to their group members (Hudon & Garzon, 2016).

An example can be unfair competition restriction due to social or group pressure. Likewise corrupt role model makes 'wrong' right for his followers; to gain the .

confidence of a "corrupt role model ", it becomes pertinent to adopt his "ways". These causes of corruption are thought to be a significant reason why corruption is flourishing in IP (Fazekas, Sberna & Vannucci, 2021). Although the importance of individual ethical standards and the power of social networks cannot be ignored, there are many other reasons why corruption is increasing in infrastructure projects.

The causes mentioned above lay a pathway to engage in acts of bribery (Burguet & Che, 2004). Low ethical standards and greed make it easier for individuals to take and give bribes (Tabish & Jha, 2012). In the study of Chinese construction projects, Wang et al. (2000) found the influence of social networks or guanxi to cause bid fixing, bid rigging and unfair restriction of competition. In a study conducted by (Fazekas & Toth, 2018), it was found that renegotiations and unfair restriction of competition in the procurement process are caused due to presence of strong social networks
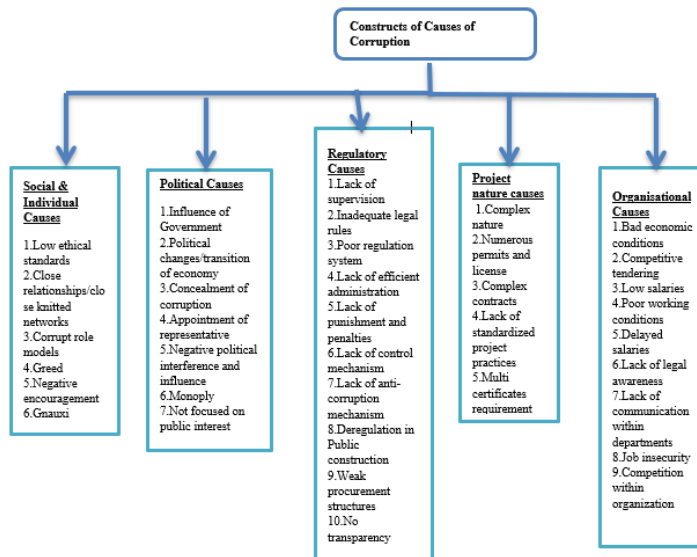

Figure 1: Constructs of Causes of Corruption

2. Regulatory causes

Non-efficient and flawed regulatory system was identified as a core cause of failure in Chinese construction projects by Le et al. (2014). The regulatory causes are rules and regulations, absence of control mechanisms, various licenses and permits requirements, and absence of an anti-corruption system in infrastructure projects. The success of an infrastructure project is closely related to how it is regulated (Mahmood, 2010). The flawed regulation and inefficient control mechanisms pave the way for corruption (Shan et al., 2017). In IP requirement to obtain various licenses and permits, the complex process of getting them, technical criteria for bidding, specific needs of the project and emergency bidding provides cracks for corruption to seep in (Søreide, 2002). In construction projects, the absence of control mechanisms and insufficient legal punishments makes it easier to pull off fraud, deception and embezzlement (Bosio et al., 2020). The regulatory causes of corruption establish fraud acts of corruption. In the study conducted by Cavill and Sohail (2008), ghosting, fake companies, deception is found in infrastructure projects where regulatory frameworks are weak, and there is no fear of getting caught and being penalized.

3. Political Causes

High-level or grand corruption in infrastructure projects is tied to personal greed or the influence of close relationships, but also such activities aim to gain more power and position. In a report issued by Transparency International (2016), government interference and influence are identified as corruption causes in infrastructure projects. An example can be a representative or firm appointment by a public official to compete for a project (Yap et al., 2020). In addition to this, revolving door, giving gifts and donations, indirect political expenditure is identified as corruption forms that surface due to government influence, concealment of corruption, monopoly and political interference (Kenny, 2006). Mauro (2017) identified that government, to gain votes through the transition of economies, tends to project a false image by announcing and starting public projects which it cannot finish afterwards due to a shortage of funds or being out of the seat. Not many studies focus on political causes and acts ofpolitical mobilization as a form of corruption in IP. However, these causes and forms are critical to understanding corruption mechanisms in developing countries (Tabish & Jha, 2012).

Political interference can yield positive or negative results in infrastructure projects. The positive aspects can be the enhancement of tendering process and awarding of contracts on a merit basis (Le et al., 2014); on the other hand, the negative aspect is awarding a contract based on political affiliation or favouring a trade group in exchange for some political benefits (Sohail & Cavill, 2008). As for lack of communication between government departments, it is noted that government employees feel secure engaging in embezzlement activities due to a lack of coordination among departments, having no fear of getting caught (Stansbury, 2009). Many are involved in such acts to survive economically, otherwise impossible, with low salaries (Ibrahim, Hamzah & Azry 2019). Another factor is the political influence that forces them to be a part of the system (Mauro,2017).

4. Project nature causes

The infrastructure projects inherently have specific characteristics which make them vulnerable to corruption. The budget of infrastructure projects is enormous, the project life cycle is long, and the scope is complex (Tabish & Jha, 2012). An extensive fund base allows funds to be misused in the name of the project

requirements (Owusu et al., 2019). The long-life cycle provides the cushion to hide misuse of funds (Stansbury, 2009). Complex scope gives an avenue to create false requirements; hence the more significant the project is, the more opportunity is to give and take bribes and kickbacks in the procurement process (Moody-Stuart, 1997). As most infrastructure projects are one of a type like building railway stations, dams, airports, their requirements are unique too. The demand for material, labour or equipment is different for each project, and hence it is easy to provide false project requirements or to purchase material at artificially inflated prices (Stansbury, 2005).

Infrastructure Projects have many contracts involved, which ultimately link the project as a whole when combined. Every contract has many participants, detailed documentation, start and end dates, scope, cost and time, and ambiguities that provide an opportunity for corruption with discretion in IP (Compte et al., 2005). Another issue with so many contracts involved is people from different skill levels, professional backgrounds, and goals, resulting in different expectations, views, and moral standards (Locatelli et al., 2017). Governments own the infrastructure projects; this means government approval for every process, even if the project involves financing by the private sector. The government officials use their powers unlawfully by taking large amounts of bribes (Flyvbjerg & Molloy, 2011). An Infrastructure project requires certification of approval at every milestone achieved; whatever work is completed needs to be approved before moving on to the next stage of construction. Each approval is given on awarding bribes to the concerned person or team (Stansbury, 2009).

5. Organisational nature causes

The organisational causes are the most mentioned corruption causes besides low ethical standards and close relationships (Rose-Ackerman, 2017). The throat-cutting competition takes a toll on individuals' performance, and hence illegal means are used to retain and maintain position within an organization (Wang, Liu & Guan, 2021). Likewise, not suitable working conditions, lack of communication within departments, competitive tendering, lack of legal awareness justify involvement in corrupt practices (Sohail & Cavill, 2008). An example can be aggressive competition between two work colleagues to bag a contract to keep their performance-based jobs.

Another dimension of involvement in corruption is due to low salaries in developing countries because induvial are struggling due to the country's dire economic condition (Monteiro et al., 2020). The inflation in developing economies is manifold, with no attention given to set salaries proportional to job roles and workload (Tabish & Jha, 2012).

Organisational causes also include organisational survival in dire economic conditions. Organizations have no choice but to engage in corruption to remain in business (Bowen et al., 2012). The competitive tendering processes encourage them to manipulate it to gain a contract and keep themselves working in the market. The countries with a declining economy like Pakistan are one of the victims of this kind of corruption where the bidding process is rigged to favour the briber (Khadim & Jaffar, 2021).

Section 2: Semi-structured interviews

Based on identified corruption causes in the infrastructure sector, thirty-four semi-structured interviews were conducted with industry practitioners of the infrastructure

sector of Pakistan. We used the expert sampling approach; this approach involves selecting individuals as a sample who have specific experience and expertise, which can be valuable for achieving research aims. As a result, the selected respondents have more than five years of working experience as project managers, project consultants, procurement officers, contract managers. The respondent's detail is given below in Table 2.

corruption and its impact on infrastructure projects; further how corruption in the infrastructure sector affects Pakistan's economy. The initial few questions were regarding how respondents understood and saw corruption, concealment of corruption, and its impact according to their experience and expertise.

The respondents were asked to identify corruption causes in IP of the infrastructure sector of Pakistan from table 1 and to add any if it's not mentioned.

Respondents Job Roles	Number of Respondents	Years of Experience	Work Location
Assistant Project Managers	5	5-10years	Islamabad
Senior Project Managers	4	10-15 years	Islamabad
Procurement Officers	3	5-10 years	Islamabad
Contract Managers	2	10-15years	Islamabad
Quality assurance head	1	10-15years	Rawalpindi
Quality assurance team	8	5-10 years	Islamabad
Project consultants	3	15-20 years	Rawalpindi
Procurement team	8	5-10 years	Rawalpindi

Table 2: Respondent Profile

These interviews were conducted from November 2021 to February 2022. Corruption is a sensitive issue and is difficult to talk about; therefore, all respondents' names and associations were kept confidential. The current study has ethical approval from the ethics committee at Teesside University. Thus, we take a pledge to keep the details of respondents in secrecy.

The interview consisted of both open-ended and closed-ended questions; close-ended questions like ranking of corruption causes in terms of frequency of occurrence were added to gain a better insight. Research aimed to explore the causes of

The respondents did not identify any new corruption causes in IP. They were also requested to validate the constructs of corruption causes in IP (figure 1).

As explained earlier, the interviews were semi-structured; according to Meyers and Newman (2007), this approach helps keep respondents focused on the aims of research by pre-developing open-ended questions. However, the researcher is ready to add more questions that may arise during the interview, which helps in gathering rich qualitative data from which valuable results can be generated (Boyatzis, 1998; Collis & Hussey, 2003; Collis & Hussey, 2009; Myers, 2009)

FINDINGS AND DISCUSSION

The data collected through interviews were analyzed using a thematic analysis approach (Braun & Clarke, 2006). The qualitative analysis approach is to extract meaningful interpretations of common responses, shared arrangements, specific understandings based on the experiences and expertise of the respondents (Maines, 2000). Therefore, the thematic analysis approach was applied; the data was coded to recognize essential instances, moments, and responses to draw meaningful results. The transcriptions of interviews were subjected to open coding initially; a line-by-line data assessment was adopted to generate codes. Further, the data collected through interviews were analysed, organized and categorized based on themes identified through literature.

The emerging themes of the data were (1) awareness and concealment of corruption, (2) causes of corruption (3) impact of corruption.

Theme 1: Awareness & Concealment of Corruption

The first question to our respondents was about how they define corruption and how aware they are of its presence; the responses suggest that corruption is a widespread and very common phenomenon in the infrastructure sector of Pakistan. With their expertise and experience, the respondents confirmed that corruption is a norm in the infrastructure sector, the misuse of authority, the obligations to return the favours, the greed to gather money and power is increasing perpetually in the infrastructure sector of Pakistan. Interview respondent (IR) 15 said,

"Corruption is pervasive in our field. It is considered part of the deal to give bribes and kickbacks; most times, we know who is nominated for the contract even before tender."

These findings are very close to what the literature suggests. Corruption in infrastructure projects is increasing daily and is an area of serious concern now (Khan et al., 2019).

IR 2 shares his opinion,

"Corruption happens discreetly; no one does any illegal act openly. On the surface, every document and action is according to the rule book."

This response validates that exploiting the procurement process's loopholes is a common practice. Shihata (1997) indicated that the addition of false technical requirements in tender documents is a common practice of corrupt politicians.

Theme 2: Causative indicators of Corruption

Corruption causes in infrastructure procurement can be numerous (Tanzi, 2006). The previous studies indicate that the most common corruption causes are project complexity and lack of regulatory frameworks (Campos et al., 2019). We asked respondents to share their experiences regarding causative indicators of corruption in IP. IR 8 said,

"The main cause of corruption is greed and political influence. Politicians focus on their interests rather than the public interest. For them, it's very normal to use low-quality material as they are not the ones using that infrastructure. For example, the public uses a government hospital, not rich politicians, so they are not concerned to meet quality standards. They exercise corruption due to weak regulatory authorities while taking advantage of the complexities of the project. Project scope is usually complex and has specific technical requirements; hence it is easier to restrict competition in tendering. Similarly, when the corrupt political leader knows there is no

accountability, it is easier for them to pull off acts of fraud."

The interview findings indicate that project nature and regulatory causes are the most common corruption causes (figure 2). The above response indicates that political influence takes advantage of project complexity and the lack of regulatory mechanisms. Cavill & Sohail (2008) stated that it is easier to manipulate the infrastructure procurement process due to the complex scope in the absence of adequate regulatory mechanisms. Regarding rankings of corruption causes on a scale of very common to not common at all, the project nature causes were identified by 70.50 % of respondents as

primary corruption causes. Whereas Political causes were identified by 64.70 % of respondents as very common, and 58.80 % of respondents considered regulatory causes very common

In addition, social & individual causes as very common by 50.00 % of respondents, and 44.41% of respondents considered organisational causes very common. Surprisingly, 14.70 % of respondents identified organisational causes as not common. Organisational causes include work environment, competition amongst workers, low salaries.
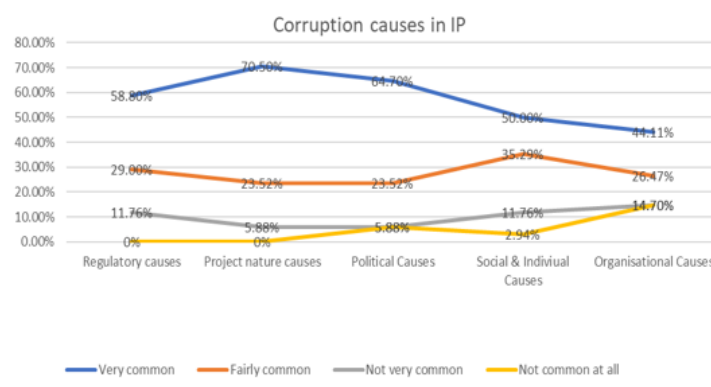

Figure 2: ranking of corruption causes

These findings suggest a need to formulate effective regulatory mechanisms to eliminate corruption causes in IP. Developing a solid regulatory mechanism can help in two ways: strengthening the supervision & accountability processes and curbing and managing project nature causes and political causes. World bank report (2022) indicates that for a country to be corruption-free, it is pertinent to develop, enhance, & apply regulatory mechanisms aimed at increasing process transparency and strengthening the rule of law.

Theme 3: Impact of Corruption

The presence of corruption in the procurement process affects the project and results in a declining economy. The door to corruption in infrastructure procurement is still open in Pakistan. Regardless of independent agencies and regulatory frameworks, corrupt practices are still in the rage. The infrastructure projects yield cost overruns, poor infrastructure, time overrun, sub-standard quality, and scope violation (Shah, 2014). As indicated in the literature, corruption results in unmanageable losses.

IR 10 said,

"The corruption results in failure of the project in terms of quality, time and scope. The projects are completed with substandard material, which is hazardous to public use. The roads break within two to three years of completion. A recent example is Islamabad international airport; its ceiling is getting apart. The runway is very dangerous for landing and taking off. The metro bus station is another example, which gets flooded in extreme rains."

The interview findings indicate that the impact of corruption results in poor infrastructure, which can be life-threatening for the country's people. Additionally, the maintenance budget is insufficient to take care of technical issues of a completed project. The corruption in IP also has disastrous effects on Pakistan's economy; findings indicate that an increase in poverty, unequal income distribution, and misuse of resources have smashed people's trust in the government. It is a part of the process to comply with corrupt procedures.

Through interviews and literature review, the above findings bring us to understand that Pakistan needs a practical regulatory framework to help manage IP corruption.

CONCLUSION

The study aimed to identify corruption causes in the infrastructure procurement process of Pakistan. The aim was achieved by two section methodology—first, an in-depth literature review of 43 articles to design an instrument of semi-structured interviews. Second, data collection through 34 semi-structured interviews to identify the causes of corruption & their impact on the economy.

The findings suggest that project nature causes, political causes and regulatory causes are most common, in line with literature review findings (section 1:

instrument design). The contribution of this study is the formulation of constructs of corruption causes based on literature review and validation of literature review findings through semi-structured interviews. The study can be valuable to project managers, policymakers and fellow researchers for designing effective regulatory frameworks.

However, the study is limited in nature. The study results cannot be generalized in other geographical contexts as corruption causes are dependent on the country's environment, ethical standards, the perception among people, the rule of law, political stability, economic stability (Tanzi, 2002). Thus, we advise conducting more studies on similar or other geographical parts of the world. A step further can be to identify corruption forms and conceptual design links between corruption forms and corruption causes in IP.

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