Economics of Corruption and its impact on Governance

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Abstract

Purpose – Governments of all political ideologies in different countries are affected by corruption scandals with a frequency and intensity that seems to be always on the increase. Corruption takes many forms, and its prevalence and potential consequences, however, seem to far exceed the attention this phenomenon has received. The initial thrust of this study is on awareness of the costs of corruption and the construction of its indicators that could be used in empirical studies. This paper reviews the domain of corruption, with special emphasis on its impact on governance and vice a versa.

Design/methodology/approach – The study is based on secondary data sources, it has used data published by various international organizations like World Bank, Fraser Institute and Transparency International. The analysis has been done with respect to India. Multivariate regression and bivariate correlation has been used on a time series data from the year 2000 to 2011.

Findings – The findings of this paper include the analysis of the types of corruption that can provide a useful lens for examining the important areas where policy shall concentrate. It also analyses the impact of corruption on governance and governance on corruption. Finally, the most important consequence of this paper is determination of policy responses based on a proper analysis of corruption, for creating governance capacities required for achieving rapid transformation.

Research limitations/implications – The accuracy of the analysis is dependent upon the accuracy of the data reported by selected organizations. Only select parameters of good governance have been analyzed. For this research to be carried out effectively it was limited on both time and space

Practical implications – This work was done, in order to contribute to the exploration of the multiple facets of the problems of governance, particularly as they relate to corruption. Responding to the problem, this study came out with the following proposal that, the campaign to fight corruption should increase and get decentralize to local levels; there must be continuous sensibilisation of the threats of corruption to good governance.

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Originality/value – The paper is an addition to the already existing pool of studies in the broad area of governance and corruption. The alternate policy recommendations which have been drawn from successful international experiences add value and substance to the study.

Keywords - Economics of Corruption; Governance; Corruption Indicators; India; Decentralization.

Paper type Research paper.

1. Introduction

In order to be able to analyze corruption, the phenomenon must first be defined and delimited. How corruption is defined has important implications for approaching the problem and for the profile and priorities of policies to address it. A standard definition of corruption, endorsed and applied by the World Bank (World Bank/IMF, 2006), is the abuse of public office for private gain. This definition covers various forms of interaction between public sector officials and other agents. Sometimes, money is involved, such as in bribery for public procurement contracts. In other cases, private gain can be non-monetary, as in cases of patronage or nepotism. The definition also covers acts where there is no interaction with external agents, such as the embezzlement of government funds, or the sale or misuse of government property.

An alternative definition, used by Transparency International (TI), sees corruption as the misuse of entrusted power for private gain. In contrast with the former definition, which includes only acts involving public sector officials, the TI definition also covers similar acts in the realm of the private sector. For example, if a subcontractor bribes an official of another company to obtain a contract, this would count as corruption. In addition to public sector corruption, then, the TI definition includes private-private corruption. This type of corruption is highly understudied, despite the fact that it may reduce private sector efficiency and hence slow development. In addition, the implications for donors of this type of corruption have not been adequately explored.

Various typologies of corruption have been suggested. For the purposes of this paper, the commonly used distinction between political corruption and bureaucratic corruption is helpful. Political corruption takes place at the highest levels of political authority (Andvig and Fjeldstad, 2001). It involves politicians, government ministers, senior civil servants and other elected, nominated or appointed senior public office holders. In other words, political corruption is abuse of office by those who make the rules of the game, e.g. decide on laws and regulations and the basic allocation of resources in a society. Political corruption may include tailoring laws and regulations to the advantage of private sector agents in exchange for bribes, granting large public contracts to specific firms, or embezzling funds from the treasury. The term ‘grand corruption’ is often used to describe such acts, reflecting the considerable sums of money that are frequently involved.

Bureaucratic corruption takes place at the implementation end of public policies. It involves appointed bureaucrats and public administration staff at the central or local level. In simple terms, it entails corrupt acts among those who implement the rules made by top officials. This includes interaction with private agents, such as demanding extra payment for provision of government services, speed money to expedite bureaucratic procedures, or bribes to allow private actions that violate rules and regulations. It also includes interactions within the public bureaucracy, such as bribes or kickbacks to obtain posts or secure promotion, or mutual exchanges of favours. This type of corruption is often referred to as ‘petty corruption’, reflecting the small payments often involved, although in specific cases and in aggregate the sums may be large.

Political corruption and bureaucratic corruption are clearly interrelated. There is evidence that corruption at the top of a bureaucracy increases corruption at lower levels (Chand and Moene, 1999). However, there are differences between the causes and consequences of political corruption and those of bureaucratic corruption. The priorities and means with which to approach each type may therefore be different. . The initial thrust of this study is on awareness of the types and costs of corruption and the construction of its indicators that could be used in empirical studies. This paper reviews the domain of corruption, with special emphasis on its relationship with the governance. The findings of this paper include the analysis of the types of corruption that can provide a useful lens for examining the important areas where policy shall concentrate. Finally, the most important consequence of this paper is determination of policy responses based on a proper analysis of corruption, for creating governance capacities required for achieving rapid transformation.

2. Review of Literature

Corruption as a phenomenon is always associated with an agency structure. An agency relationship arises when two individuals enter a non-market (contractual) relationship and where one individual (commonly termed as the Principal) relies on another individual (commonly referred to as the Agent) to carry out certain actions on his behalf. The actions of the agent affect the principal's payoff in a significant way. Problems arise in such relationships when (i) the principal and the agent have dissimilar objectives and (ii) the principal is unable to write comprehensive enforceable contract with the agent regarding the desired course of action. The inability to achieve such contractual solutions arises because of several reasons- lack of full information, lack of verifiable information and presence of unforeseen contingencies. However, for corruption to emerge, there is a need of conflict of interests between government and tax payers, regulator and firm, police authority and potential criminals, government provider of services and potential. Corruption occurs due to lack of sufficient information. Based on whatever information available, the government tries to put an incentive scheme in place so as to induce optimal action by the agent. (Ajit Mishra 2004).

Various authors have used this agency framework to analyze corruption. The early work by Rose-Ackerman (1975) focuses mainly on the agency relationship between the authority and the inspector. Corruption arises when "some third person, who can benefit by the agent's actions, seeks to influence the agent's decision by offering him a monetary payment which is not passed on to the principal". In our example, a polluting firm is the third person.

Similarly, Klitgaard (1988) uses what he calls a principal-agent-client relationship, where the regulator is the principal, the inspector the agent and the firm is the client. In economics, principal –agent problem has received lot of attention since 1970s but the extension to the issue of corruption is only recent. Some economists also describe this as principal-supervisor-agent relationship. The above analysis suggests that bureaucratic corruption, corruption in many enforcement agencies do fit easily to an agency framework. On the other hand, political corruption (corruption by politicians) would require us to extend the framework. We can view citizens as principals and the elected representatives as agents.

Myrdal (1968) argues that corruption is associated with lack of developments in the economic sphere as well as the public sphere of responsibility and power. While the economic sphere lacks proper market and profit motive, profit considerations have found a 'market' in the public sphere. According to him, these are remnants of pre-capitalist traditional society. In this view, corruption is part of the remaining traditionalism of modernizing societies. As discussed earlier, informational asymmetry and contractual incompleteness are the two main sources of such power.

Tirole (1986) looks at the collusion possibilities between the supervisor (inspector) and the agent (firm) in a framework of the first type. In his analysis, the supervisor has a purely information gathering and reporting role. The principal's policy towards the agent depends on this information. In tax collection, it would depend on the individual's income levels and other individual specific information. In all these settings optimal policy is sensitive to agent related information. Since the principal and the agents do not share the same objective, optimal policy under incomplete information would leave large amount of rents to the agents. This gives rise to the scope for collusion between the supervisor and the agent- by manipulating the report to the principal the supervisor and the agent can share the rent. In such situations, the principal has to settle for policies which limit the amount of rent that can be appropriated through such collusion

There is now a sizeable literature on collusion and mechanism design with collusion possibilities. However, in much of the work, the distortion is only in one direction. The supervisor takes a bribe (side payment) to submit an agent favorable report. Depending on the nature of the information, it is also possible that the supervisor can submit an agent-unfavorable report. In such a case, bribery might still occur but as a form of extortion. Now the agent will be bribing the supervisor not to distort the true information, as opposed to the previous case where the agent bribes the supervisor to distort the information. Extortion is as important as the study of collusion. If by paying a bribe to the inspector, I can avoid penalty for tax evasion then I will be tempted to evade taxes. Similarly, if by being an honest tax payer I might be subject to extortion by the inspector, I will be equally encouraged to evade taxes. Hence, both forms of corruption lead to distortion of incentives. Prevention of collusion between the supervisor and the agent has received lot of attention. In many of these cases one can design mechanism which can prevent collusion. However, it is not clear how they affect the extortionary behavior of the supervisor. Do these schemes, proposed to prevent collusion, help reduce extortion as well or do they encourage extortion? Is it possible to design mechanisms which prevent both forms of corruption? It appears that there is a basic conflict between these two objectives.

3. Types of corruption

Riley categorizes corruption under three headings. The first is incidental corruption. This is small-scale. It involves junior public officials, such as policemen or customs officers; it produces profound public alienation; it has little macro-economic cost, but it is often hard to curb. Secondly, there is systematic corruption. This is corruption that affects, for example, a whole government department. It can have a substantial effect on government revenues; it may divert trade and/or development; it can only be dealt with by sustained reform. Systematic corruption will include political corruption (buying votes, discrimination in the selection of candidates, dubious sources of party funds, jobs for supporters) and corruption of the legal process (buying judges and policemen, malicious prosecutions). Thirdly, there is systemic corruption, that is, government by theft. In this situation honesty becomes irrational, and there is a huge developmental impact.

As already noted, privatization offers scope for embezzlement as state-owned assets may be under-priced and then bought by insiders. The process of public procurement gives wide scope for corruption (through paying bribes to secure contracts, over-priced contracts, insider dealing, claiming payment for goods which have not been delivered, etc.) The exploitation of resources that are either scarce or illegal provides many examples of bribery.

Implicitly, the neoclassical analysis of corruption focuses on opportunities for corruption created by state interventions that are not themselves necessary for economic development. Examples would be unnecessary red tape and restrictions on private sector activities that serve no useful purpose except to create opportunities for public officials to extract bribes from private citizens seeking to avoid these
restrictions. In these cases, not only is the intervention unnecessary, the corruption imposes additional costs on society. But not all state activities are of this type and, by making this distinction, some sense can be made of the historical evidence. While bribing and other ways of illegally influencing the state imposes costs on society, the net economic effect of corruption also depends on the type of intervention or subversion of policy that is achieved through the bribe.

Moreover, in addition to these types of necessary interventions that can potentially be legally regulated, other necessary interventions are more problematic because they cannot be sanctioned and regulated by law. For instance, often in developing countries, there are interventions that cannot be legally sanctioned for political reasons even though they are necessary for maintaining political stability or economic growth. These distinctions between types of corruption are important for understanding both the economic and political effects of corruption and the appropriateness of different anti-corruption strategies.

Based on this discussion, at least four types of corruption can be distinguished. The differences between them depend on whether the underlying interventions are potentially necessary for economic or political reasons, and whether the interventions in question are legally allowed or

not. While all corruption involves the violation of some formal rules of conduct, the underlying interventions with which they are
associated may themselves be legal or illegal, and they may be harmful or beneficial for economic development. These distinctions are important for identifying the types of policies that may be appropriate for dealing with different types of corruption, and to identify some types of corruption that may not be amenable to any simple policies.

This classification is shown in Table 1. Only the first type of corruption is relevant for the anti-corruption policies that are widely promoted by multilateral agencies following the neoclassical analysis. These corrupt acts are associated with laws that enable interventions that have no potential to assist economic development. These dysfunctional interventions not only cause direct economic damage, they cause secondary damage through corruption as entrepreneurs attempt to capture monopoly profits. They include, in particular, the "petty corruption" involving low level officials extracting small bribes for performing their duties (red-tapism and speed money), for not harassing the innocent by deliberately misinterpreting very complex and unclear regulations (customs officials or police engaging in petty extortion). This is the most visible face of corruption and public irritation with these types of corruption often dominates. Police corruption, for example, often takes top position in popular perceptions, largely because the police in developing countries have the powers to gain from widespread petty corruption when implementing complex and badly defined laws.

Table 1. A Typology of Corruptions Affecting Developing Countries

	The Required Interventions ARE Legally Allowed	The Required Interventions are NOT Legally Allowed
Interventions that **are** required for Economic Development or Political Stability	ii) This type of corruption may be associated with growth or stagnation depending on how seriously necessary interventions	iii) All such interventions are likely to involve corruption. These types of corruption may be associated with growth or stagnation depending on the

	(market regulation, promotion of industries, subsidies for political stabilization) are subverted. Anticorruption policy should seek to improve implementation and reduce corruption, but not to remove the interventions.	nature and extent of these interventions (political stabilization using off-budget transfers, preferential access to resources for emerging capitalists). Policy should focus on legalizing necessary interventions and reducing damaging interventions.
Interventions that are **not** required for Economic Development or Political Stability	i) These types of corruption are associated with dysfunctional interventions (unnecessary paperwork and permissions, protection of inefficient industries) and always have negative effects. Policy should seek to remove these state "functions" (through liberalization and privatization). This has been the focus of mainstream anti-corruption strategies.	iv) Predatory Extortions. This type of corruption predominates in failed or failing states where armed groups can extort from society regardless of political stability or economic performance (extortion by political mafias). Effective policy to counter this type of corruption has to strengthen the centralized coercive power of the state.

While these types of corruption are very irksome and can affect the greatest number of people, they are not necessarily the most damaging type of corruption from an economic perspective. Nevertheless, these types of petty corruption are damaging, they are regressive in that the victims

are very often the poor, and they increase transaction costs and the general perception of lawlessness in developing countries. It
is for this type of corruption that the neoclassical analysis of corruption is most appropriate. The ability of the state to define unnecessary laws can encourage the creation of more and more artificial restrictions and more and more red tape to increase opportunities for extraction (Myrdal 1968: 937-51). For this type of corruption, the liberal prescription of liberalization and privatization would, in theory, be the most appropriate, together with direct anticorruption measures such as higher salaries for public officials and more effective punishments. But it is doubtful if this is the most important type of corruption in most developing countries. If this is only a part of the corruption problem, and if in addressing this, the policies involved damage the potential of accelerating development through state intervention, then these policies may hinder, rather than help the reduction of corruption in the long-run. A better approach would be to target these types of corruption separately, rather than with general anti-corruption strategies that may at best make sense for particular types of corruption.

The second type of corruption shown in the table is associated with the implementation of interventions that are potentially necessary for the economy or polity, and which are allowed and regulated by law. These include such things as managing taxes and tariffs to promote catching-up by domestic industry, the regulation of financial markets, the allocation of land and the licensing of land use, and the allocation of credit or the prioritization of infrastructure construction. Nevertheless, the simple neoclassical prescription of fighting corruption through liberalization can have problematic consequences as soon as we begin to look at these cases. The difference is that for this category of corruption, the decision that the public official is providing or making is potentially beneficial for the economy though, in practice, the decisions may often be damaging because corruption may subvert the type of decision or allocation that is being made. A more involved analysis is now required that distinguishes between those functions of the state that are never likely to play a useful role, and those that can. The policy response to the two should be very different.

The third type of corruption shown in our table refers to a much more problematic area associated with the implementation of necessary interventions that are not, or cannot be, regulated by law. These include processes of political stabilization through off-budget transfers. Some of these state actions can be legal, in the form of changes in relative prices, taxes, land licensing and so on, but others cannot be legalized because the underlying processes are too politically unpopular, unjust or unfair for it to be possible to codify and regulate them. By definition, developing countries have large segments of their economies that are unviable in terms of the technologies and prices set by the world market. As a result, developing countries are typically forced to go through rapid economic and social transformations simply because pre-existing economic formations are often rapidly collapsing

Finally, the worst type of corruption is the fourth type, where the social order has broken down completely and corruption is associated with illegal interventions that have no economic or political rationale for any group apart from the predatory "officials" involved. This type of corruption is based solely on the coercive power of small groups to extort from the majority.

4. **Cost of corruption**

The various negative effects of corruption have been well documented, theoretically as well as empirically. It adversely affects allocation of resources distorts the incentive mechanisms and reduces efficiency leading to lower investment, growth and income. But, can corruption be beneficial in any particular context? This question has been asked by many social scientists. Some social scientists emphasize the fact that corruption may be efficient and stress the functional characteristics of bribery in holding some economic and political systems together. Bribes are seen as necessary tools to "grease the wheels" of commerce by cutting down red tape and improving efficiency. This might seem true in some cases from a partial equilibrium perspective. If there are rigid and inappropriate laws already in place and bribe payments can be used to circumvent these then efficiency is perhaps enhanced. However, this view has been rejected by most economists. As Myrdal pointed out in his early work this view ignores the fact that such payments would encourage bureaucrats to increase rigidity and red tape in the bureaucracy to extract greater bribe payments. In fact, once such corrupt practice spreads and corruption is perceived to be rampant, honest officials would also tend to increase red tape by spreading and sharing responsibility to the maximum extent possible.

The grease hypothesis does not find much empirical support as well. Kaufman and Wei (1999) use firm level data from three different surveys covering more than two thousand firms and find no support for the hypothesis. Rather, they observe that bribes and measures of official harassment are positively correlated across firms. They examine the relationship between bribe payment by firms and various measures of effective bureaucratic harassment both within and across different countries included in the survey. From a political science perspective also this view of the functional role of bribery has not been widely accepted. High levels of corruption have been associated with political instability rather than stability. Seligsson (2002) examines how corruption tends to diminish citizen's trust and faith in democratic governance. Johnston (1998) also does not favour the politically integrative role of corruption and argues that it also has many disintegrative features.

Critics of the functionalist view would also point out that if corruption did serve important functions, then one would have seen legalization of these practices. Irrespective of whether one agrees with the functionalist interpretation or not, there is no denying the fact that corruption is present many societies in the governmental sphere. This has been viewed by many as a case of government over-extending itself into the market place. Politicians and bureaucrats have a vested interest in increasing government intervention. The optimal outcome, according to this view, would be a minimalist state. Government intervention should be minimized even in the presence of market failures. However, as Rose-Ackerman (1978) points out, some level of corruption is inevitable in every mix of market and government. Hence instead of using the existence of government corruption as an indictment of the system, one should be looking at the trade-off between government corruption and market failures.

But why does corruption receive so much attention, why do international organizations make an effort to measure it and why do governments and businesses pay them to do so? The World Bank describes corruption as one of "the greatest obstacles to economic and social development. It undermines development by distorting the rule of law and weakening the institutional foundation on which economic growth depends (WB: FAQs: Fraud & Corruption). Transparency International states, that corruption can in worst cases cost lives. More commonly, it costs people their freedom, health and money. (TI: What are the costs of corruption?)

Transparency International illustrates the extent of the costs of corruption for a society by dividing them into four categories. Severe *political costs* may arise, as corruption has the power to undermine democracy and the rule of law. Whether it is petty corruption that people face in their everyday lives, or grand corruption committed by high-ranking officials, corruption weakens the belief that a country is governed by laws. Where officials abuse their office for personal gain, they lose legitimacy and democracy as a system is often challenged. A lack of trust in democracy opens up space for extremism and for calls for a change of the democratic system. A lack of stability in the political system, in turn has a negative impact on the economy. According to TI, political costs of corruption are even higher in emerging democracies.

Political costs are closely associated with *social costs* in the form of a lack of trust in the society. If rules do not apply the same way for everyone and some people bend them by means of corruption, people's trust in the society, its rules, and in each other weaken. A lack of trust means lower social capital: if people don't trust each other, they take precaution and dealing with each other becomes more costly. Thus, a lack of trust in the society has negative economic implications.

Indeed, corruption also means severe *economic costs* for the economy, as it depletes national wealth and slows down growth. It does not necessarily prevent high growth. Corruption may negatively impact the economy by creating red tape in order to extort bribes. By favoring businesses which are willing to pay in public procurement, corruption distorts competition and leads to wastefulness in public funding. Governments may also shift public investment to certain sectors of the economy or particular projects by allocating funds based on bribes rather than need. Diverting public funds in turn pushes governments to provide poor quality services, further complicating the conditions for doing business. On the whole, corruption raises the overall costs of doing business and thus deters foreign investment, supports the informal market or tax evasion.

Finally, perhaps the most specific of the four are *environmental costs,* i.e. damaged environment. Environmental costs result from unregulated exploitation of natural resources due to corruption.

Depleting or destroying natural resources such as water, woods or mineral resources may come at a high price for the economy.

5. Methodology and Data Sources:

"Good Governance" has been characterized by United Nation Educational, Scientific and Cultural Organisation (UNESCO) as the one with:

a. Participation (including freedom of association);
b. Transparency (including citizen's access to information);
c. Effectiveness and Efficiency (making the best use of resources)
d. Responsiveness (serving stakeholders in reasonable time frames)
e. Accountability (answering to those affected by decisions);
f. Consensus-Oriented (or mediation of diverse interests);
g. Equity and Inclusiveness (ensuring inclusion, particularly of minorities);
h. The Rule of Law (legal frameworks that are enforced impartially).

The study analyses the relationship between corruption and governance over the span of 12 years from 2000 to 2011 by using select governance parameters amongst the eight mentioned above. The Corruption Perception Index published by the Transparency International has been used a measure for corruption in India. Transparency International (TI) allocates the score from 0 to 10, where 0 is the least transparent or highly corrupt and 10 the most transparent or least corrupt. The countries with lower scores have greater problem of corruption whereas, those with higher score are relatively cleaner economies. But for the purpose of exposition the scores have been inversed. The corruption scores now reflect higher corruption at higher score and lower corruption at lower score (Hopkin et al. 2007).

The parameters which have been chosen to represent governance are Effectiveness and Efficiency; Accountability; Equity and Inclusiveness and Rule of Law. The proxy variables for these parameters are as follows:

a. Business regulation has been taken as a proxy to effectiveness and efficiency. Business regulation is the variable which the representative of various kinds of bottlenecks faced by the economic actors like obtaining licenses, bureaucracy costs, administrative requirements etc.

b. Labour regulation is used as a proxy for accountability. The labour regulation is a representative factor of variables like minimum wages, work hours regulation, hiring and firing etc.
c. Transfers and subsidies are used as a proxy variable to equity and inclusiveness. This reflects the socio-economic role of the government with an aim to have inclusiveness and equity in the country.
d. Tax as a percentage to GDP has been used as a proxy to Rule of law.

The parameter of transparency gets covered with the corruption perception index as TI uses lower and higher transparency as criteria to classify level of corruption.

The data has been taken from database of various international agencies. The data with respect to corruption has been taken from Transparency International. Business Regulation and Labour Regulation have been taken from Fraser Institutes publication Economic Freedom Index, lastly, the tax as a percentage to GDP has been taken from World Bank.

The study has used time series data for the five variables from 2000 to 2011. The time period has been selected because of data availability and methodological issues. The time series data on business regulation and labour regulation was not available before 2000. Besides this, the score of corruption in the corruption perception index since 2012 is not comparable with the ones till 2011. In order to establish a relationship or study the effects of corruption on governance and vice a versa, a multivariate linear regression model using OLS and bivariate correlation analysis has been run. The post estimation tests were carried out to see if the results of regression were linear, consistent etc. The analysis has been carried out using STATA SE 12.0 and SPSS 16 software.

6. Analysis:

A multivariate regression using simple OLS is used to find out the relationship between corruption and the governance parameters like labour regulation, tax revenue as a percentage to GDP, business regulations and transfer payments and subsidies. The following model has been specified:

$$\mathbf{Corrup = \alpha + \beta_1 busireg + \beta_2 labreg + \beta_3 trnsfrsub + \beta_4 taxgdp + \varepsilon}$$

For the above equation the following results were obtained:

F= 26.36, Prob. > F = 0.003, R^2= 0.9377, Adjusted R^2 = 0.9022, RMSE = .0102

Corrup = .2560 (.0538) + .00021busireg (.967) - .00383labreg (.597) + .0326trnfrsub (.008) – .0177taxgdp (.001)

(Values in the parentheses are the probability values attached to each variable.)

The calculated value of F is 26.36 and the probability attached with this F value is 0.003 which is less than the calculated F value therefore, the independent variables are reliable enough to explain variations in the dependent variable. The model has R^2 and Adjusted R^2 values above .9 which clearly shows that the independent variables explain over 90 per cent of the variations in the dependent variable. The model is well fit.

The **regression results** show that there exists a positive relationship between corruption and business regulation in case of India. But the relationship is statistically insignificant as the p-value is greater than .05 or the relation is not significant at 5 per cent level of significance. The labour regulation is inversely related with corruption i.e. if labour regulation increases the corruption level goes down. The relationship is statistically insignificant. Many studies have pointed out its converse to be true in case of labour regulation. They are of the opinion that the stringent labour regulations hamper the process of growth and development and induce the entrepreneur to indulge into rent seeking activities. But the study by Leff and Huntington points out that the corruption might raise economic growth by increasing the speed of the activity (Mauro, 1995).

There is a significant positive relationship between corruption and transfer payments and subsidies in India. An increase in the number of transfer payments and subsidies indicate an expanding role of the public sector in the economy. It is established by the literature that higher the state intervention higher would be the level of corruption. The increased domain of public sector gives the officials a rent seeking opportunity. The last relationship which is analyzed is tax as a percentage of GDP with level of corruption. The relationship is inverse and highly significant with respect to India. That is, with an increase in corruption the tax-GDP ratio gets deteriorated and vice-a-versa. It is imperative for a country to collect sufficient taxes in order to execute its responsibilities. Lesser tax revenue leads to lower quality of services provided by the government and lesser mass satisfaction (Rose Ackerman 2004). Thus corruption impacts the governance in a big way.

The **post estimation tests** were also conducted and the regression was found free from the problems of autocorrelation, heteroskedasticity and mullticollinearity. The Durbin Watson d statistics test was applied to check if there was any serial correlation or auto correlation. The test value was 2.7 which is above 2 which implies there is negative autocorrelation, but the value falls within the range d and 4-d_u i.e. the indecision zone thus we cannot reject the null hypothesis of no autocorrelation. The Breusch-Pagan Test was carried out to see if the problem of heteroskedasticity was present. Since the probability value was greater than the chi square value the null hypothesis of constant variance is not rejected. Thus data is homoscedastic. The mullticollinearity was checked with VIF and tolerance test (inverse of VIF). The rule of thumb for VIF and tolerance level says that the values less than 10 and .10 are devoid of the problem of mullticollinearity. The calculated VIF and tolerance test came within the limits. Thus the regression estimates are reliable.

The **correlation** was also found out between all the five variables. There exists a high negative correlation between corruption and tax-GDP ratio. The correlation value is -.826 and it is significant at 1 percent level of significance. This reiterates the regression result. Therefore an increase in corruption will lead to lower compliance with tax norms and vice a versa. Similarly, transfers and subsidies are positively correlated with corruption. The correlation value is .743 and is significant at 1 per cent level of significance. The increase in government's role to provide services increases the chances of occurrence of activities which are rent seeking in nature. The third relationship which is significantly correlated is between labour regulation and corruption. The correlation value so obtained is -.692 and it is significant at 5 percent level of significance. The result is inconsistent with the established literature and thus doesn't find much of support from the existing literature. Corruption and business regulation have a lower correlation value and is insignificant at both 1 as well as 5 per cent level of significance.

7. Conclusion:

The presence of corruption in a country fails the objectives of good governance as it has implicit social, economic and environmental costs. The economic costs would include the loss of earnings on all fronts like taxes (both direct and indirect), loss to the economy due to scandals, under utilization of capacity etc. Whereas, with social costs the loss of trust which is attached majorly. In case of environment too inefficient use due to corrupt practices may lead to a higher cost for the nation. The study comes up with the following conclusions: the governance is impacted by the corruption level which can be seen from the high and significant correlation of corruption and governance parameters. There is high negative correlation between corruption and tax-GDP ratio and high positive correlation between corruption and transfer payments and subsidies. Similar, results have been obtained with regression where these two factors are significantly impacting corruption level. Thus, Good Governance should be adopted as a *mantra* to reduce the costs of corruption which emerge as by product of inefficiencies due to rent seeking activities.

8. Policy Recommendations

Given the landscape of increasing global trade, private-sector infrastructure development, globalized supply chains, and a push into new markets for new customers, there should be more efforts toward increasing the costs of private-sector corruption. Some recommendations below are not original, but they are worth repeating because they have been either underutilized or not implemented in the spirit intended. These recommendations are not all actionable. Transparency, enforcement of existing rules and laws, and the enactment of new measures must increase to reduce the toll that corruption takes on the world's economy. However, these are not sufficient without companies implementing management systems, internal processes, and culture change to prevent corruption.

The policy recommendations below outline ways to use diplomacy, and multilateral organizations such as the G20and the United Nations to create incentives for companies and governments to participate in global transparency initiatives. Because private- and public-sector corruption are interlinked, many of the recommendations are cross-cutting and require cooperation among several stakeholders.

1. At the company level: Companies should join the emerging ecosystem of anticorruption initiative and incorporate clear-cut and effective procedures and practices that comply with emerging ethical standards.

2. At the multilateral level: For example, the OECD is currently reviewing the OECD Principles of Corporate Governance due in 2014 or 2015. The country members should ensure strong

disclosure principles, particularly in compliance and ethical standards. The United States should create coalitions to ensure this happens.

3. At the country level: Countries should further develop their disclosure national codes and best practices. Governments, civil society, associations, and, indirectly, multilateral and bilateral assistance agencies should support companies to develop disclosure procedures to ensure compliance with the international standards. Transparency can be effectively tackled by addressing demand-side issues such as government-driven corruption.

Private-sector Recommendations

1. Develop a deeper research agenda on the link between good governance and its positive effect on the value of the company.
2. Apply new technologies to fight corruption, which requires businesses, coalitions, and other stakeholders to seek policy change to allow modernization of systems through technology.

3. Include comply-or-explain features of international, national, and multisectoral anticorruption initiatives as a common starting point for members; that is, if a company cannot enforce rules, it must explain why not.

4. Strengthen and educate independent media around the world. Use bilateral foreign assistance to support independent media to act as additional watchdogs. Businesses and business coalitions need to work with media to educate and train business journalists on the root causes of corruption, as they have the technical know-how. They also have the impetus to provide such training, as they are directly affected via stock market volatility when scandals erupt in their own sector of work.

Public-sector Recommendations with International Coordination

1. Governments should form a "national-level coordinating body." Such an organization should be responsible for creating an anticorruption strategy that includes buy-in from various stakeholders. They should also be responsible for ensuring implementation and oversight. People

independent of the coordinating body, ideally those who represent a broad spectrum of civil society, should lead the oversight.

2. It is impossible to tackle all corruption at once; anticorruption initiatives should instead focus on reducing corruption in areas of the country with a comparative advantage and high potential for foreign investment. Realistically, the “going to zero” option is not viable. However, it is important that key agencies or areas are identified as a starting point. These areas should have the most competitive potential for economic growth, including capacity building within key line ministries. As momentum builds and economic progress is made, the government can evaluate other areas to tackle.

3. Information sharing between governments can provide vital tools and assistance to reduce corruption that takes into account local conditions and culture. Regional diagnostic studies carried out by different countries but for similar sectors can be shared and tweaked to develop greater regulatory and compliance systems. With time, the challenges and prospects will also emerge and can be shared.

Multilaterals, DFIs, and Aid Organizations Recommendations

1. Provide financial support (even seed funding) for multi-stakeholder coalitions in countries to fight corruption similar to the models described in this report.

2. Require anticorruption components of free-trade agreements, including strengthening state procurement systems. Further research is required on how to implement these components.

3. Make increased investments in “governance” activities, including improved rule of law, increased support for investment climate reforms, and strengthened procurement systems.

4. Require increased research on effective implementation of “transparency pacts.” There should be thorough research of transparency pacts from the time of their inception, to see what has

worked or failed in certain environments, and what more can be done on an operational level, especially by the U.S. government, regarding commerce.

5. Address illicit financial flows and tax evasion. While gaps remain in stemming illicit financial flows, there have also been some successes, the latter providing lessons for the future. Combating tax evasion is a multi-stakeholder task. The most important component of tacking tax evasion is information exchange between countries. In this regard, governments and multilaterals that assist governments in developing
compliance and anticorruption frameworks will be key players.

6. Allocate/award special funding for countries that have shown a commitment to combat corruption. This funding can be used to analyze particular sectors that are more prone to legal loopholes and corruption. Following this, a formal strategy can be designed that is context specific to reduce corruption.

7. Get political buy-in, particularly from those who benefit from corruption, for taking on the major challenge of combating corruption. There are ways to get this buy-in. For those leaders who have shown a commitment to broader economic growth, it is essential that any anticorruption improvements are not "political suicide. For this to be successful, confidential assistance needs to be provided to help political leaders understand anticorruption efforts and the political costs and benefits. Examples from other countries would be helpful. But even for these efforts to succeed, "leaders need political insulation."

8. Acquire more data, based on the challenges identified in quantifying private sector corruption, in order to get accurate estimates that can then be applied over time or be used as realistic benchmarks. In the age of big data, it is necessary to explore more options for gathering such data, especially with the outreach that donor agencies and international finance institutions have. This should be a focus when designing national surveys that look at business conduct and investment climate. The role that the private sector can play in assisting with this should also be explored.

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3. http://www.transparency.org/research/cpi/

Appendix

Year	Corrup	busireg	labreg	trnfrsub	taxgdp
2000	0.3571	6.3	6.05	8.6	8.7
2001	0.3703	3.9	6.07	8.6	7.9
2002	0.3703	4.5	6.90	8.6	8.5
2003	0.3571	5.0	6.78	8.6	9
2004	0.3571	5.7	7.12	8.9	9.4
2005	0.3448	5.9	7.27	8.7	9.9
2006	0.303	4.9	7.25	8.7	11
2007	0.2857	4.9	7.27	8.0	11.9
2008	0.2941	5.0	7.29	7.7	10.8
2009	0.2941	5.3	7.93	7.7	9.6
2010	0.303	5.1	8.05	7.7	10.2
2011	0.3225	5.3	8.02	7.7	8.8

Table 2: Data on Corruption and Governance Variables

```
. regress cpi busireg labreg trnfrsub taxgdp

      Source |       SS       df       MS              Number of obs =      12
-------------+------------------------------           F(  4,     7) =   26.36
       Model |  .010994829     4  .002748707           Prob > F      =  0.0003
    Residual |  .000729917     7  .000104274           R-squared     =  0.9377
-------------+------------------------------           Adj R-squared =  0.9022
       Total |  .011724745    11  .001065886           Root MSE      =  .01021

------------------------------------------------------------------------------
         cpi |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     busireg |   .0002131   .0050322     0.04   0.967    -.0116861    .0121123
      labreg |  -.0038316   .0069235    -0.55   0.597    -.0202032    .0125399
    trnfrsub |   .0326172   .0090037     3.62   0.008     .0113267    .0539076
      taxgdp |  -.0177389   .0029428    -6.03   0.001    -.0246975   -.0107804
       _cons |   .2568699   .1106947     2.32   0.053    -.0048815    .5186213
------------------------------------------------------------------------------
```

Figure 1: Regression Analysis

```
Durbin-Watson d-statistic(   5,     12) =  2.704496

. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of cpi

         chi2(1)      =     0.40
         Prob > chi2  =   0.5245

. estat vif

    Variable |       VIF       1/VIF
-------------+----------------------
      labreg |      2.21    0.452525
    trnfrsub |      2.00    0.500653
      taxgdp |      1.25    0.799046
     busireg |      1.07    0.937994
-------------+----------------------
    Mean VIF |      1.63
```

Figure 2: Durbin Watson test, BP test and VIF:

Table 3: Correlation

		corrup	busireg	labreg	trnfrsub	taxgdp
corrup	Pearson Correlation	1	-.029	-.692*	.743**	-.826**
	Sig. (2-tailed)		.928	.013	.006	.001
	N	12	12	12	12	12
busireg	Pearson Correlation	-.029	1	.106	.089	.112
	Sig. (2-tailed)	.928		.742	.784	.729
	N	12	12	12	12	12
labreg	Pearson Correlation	-.692*	.106	1	-.689*	.444
	Sig. (2-tailed)	.013	.742		.013	.148
	N	12	12	12	12	12
trnfrsub	Pearson Correlation	.743**	.089	-.689*	1	-.324
	Sig. (2-tailed)	.006	.784	.013		.304
	N	12	12	12	12	12
taxgdp	Pearson Correlation	-.826**	.112	.444	-.324	1
	Sig. (2-tailed)	.001	.729	.148	.304	
	N	12	12	12	12	12

*. Correlation is significant at the 0.05 level (2-tailed).

		corrup	busireg	labreg	trnfrsub	taxgdp
corrup	Pearson Correlation	1	-.029	-.692*	.743**	-.826**
	Sig. (2-tailed)		.928	.013	.006	.001
	N	12	12	12	12	12
busireg	Pearson Correlation	-.029	1	.106	.089	.112
	Sig. (2-tailed)	.928		.742	.784	.729
	N	12	12	12	12	12
labreg	Pearson Correlation	-.692*	.106	1	-.689*	.444
	Sig. (2-tailed)	.013	.742		.013	.148
	N	12	12	12	12	12
trnfrsub	Pearson Correlation	.743**	.089	-.689*	1	-.324
	Sig. (2-tailed)	.006	.784	.013		.304
	N	12	12	12	12	12
taxgdp	Pearson Correlation	-.826**	.112	.444	-.324	1
	Sig. (2-tailed)	.001	.729	.148	.304	
	N	12	12	12	12	12

**. Correlation is significant at the 0.01 level (2-tailed).