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**MGT682 Independent Studies**

**Corruption in China: Effects on Economic  
Development and Remedial Policies**

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## Research Proposal Topic

Corruption in China: effects on economic development and remedial policies

## Introduction

Corruption has been recognized as a corrosive development since ancient times; corruption was discussed in writing by Kautilya of India in 300 B.C. However, corruption has become the focus of more intensive research efforts as the world economies became more globalized. Firms in developed nations are investing in developing countries to access their low cost labor and other resources. They are also investing in developing countries because the population base there represents large potential source of customers for future growth. These firms and their managers are coming into direct contact with corruption for the first time as they invest in or start doing business in developing countries. Concurrently, international agencies like the World Bank, United Nations, and International Monetary Fund are trying to promote the economic and social development and growth of the developing countries. These entities also initiated research on corruption because they found corruption to be one of the major impediments to their efforts.

Academic research on corruption and its effects are relatively new when compared to other disciplines like finance and economics: most of the theoretical and empirical work on corruption took place over the last fifteen years. While earlier research focused on defining corruption and its scope, devising measurement instruments, and finding associations between variables, the current research are starting to uncover causal relationships between the variables. However, the study of corruption is made complicated by its intertwined relationship with the nature of the institutional infrastructure and its interactive nature with human behavior which can be irrational at times.

## Objectives and Hypothesis

The objectives of this paper are to:

- (a) define a conceptual framework of corruption that includes activities in the public and private domains,
- (b) review proposed causes of corruption,
- (c) provide an overview of the current corruption measurements used in empirical research,
- (d) discuss the general effects of corruption on economic development and growth,
- (e) evaluate proposed policies and actions to reduce corruption,
- (f) quantify the effects of corruption on China's economic growth using a comparative case study approach, and
- (g) evaluate the effectiveness and feasibility of corruption reduction policies within the China context.

We hypothesize that:

H<sub>1</sub>: The economic effects of corruption in China is large.

H<sub>2</sub>: Each country has its own distinct historical, cultural, economical and political development. Policies and actions to reduce corruption must take these factors into account to be effective. We will evaluate the effectiveness and feasibility of corruption reduction policies for implementation under the China context.

## Nature of Research

This research paper is explanatory in nature in that we will quantify the effects of corruption on economic growth and development and foreign investments in China. We will also recommend policies that can reduce corruption in China based on case study of reforms in other countries and theoretical and empirical contributions from research.

## Rival Theories

There are two rival theories to the current study of corruption. The first rival theory proposes that corruption is the “grease” in a bureaucracy that helps to allocate resources more efficiently. The second rival theory proposes that there can be multiple equilibrium levels of corruption in an economy.

**“Grease-the-wheels” Theory.** The “grease-the-wheels” theory proposes that bribery is a mechanism to efficiently allocate scarce resources in an otherwise bureaucratic system (Leff 1964; Kaufmann 2000). Corruption, and bribery in particular, might be beneficial economically under this view because:

- (a) bribery is an efficient resource allocation mechanism to match demand with supply.  
The most efficient and lowest cost firms are able to afford the highest bribe payments and receive the subject goods and services, hence improving the resource allocation of the economy,
- (b) bribery minimizes the waiting time for those who are willing to pay extra to obtain the goods and services because their marginal benefits from these goods and services are higher (Lui 1985; Kaufmann 1997),
- (c) bribery can be used to make monopolistic industry more competitive by instilling a principal of competition for better allocation of resources (Leff 1964),

- (d) bribery can efficiently circumvent burdensome regulations, ineffective legal systems, and inefficient institutional structures, and
- (e) firms will place higher value on their resources as the costs are higher due to corruption.

Subsequent theoretical and empirical research has overturned this “grease-the-wheels” argument. It was found that:

- (a) corruption causes increasing, excessive and discretionary regulations as agents clamor for more opportunities to extract bribes (Bardhan 1997; Kaufmann 1997; Kaufmann 2000),
- (b) in most situations, there are multiple independent bribe takers each of whom cannot control the whole process. They extract bribes not to increase the speed but rather not to delay the process (Bardhan 1997). As a result, corruption cannot increase the efficiency of the system; instead, non-payment of bribes increases the inefficiency of the system,
- (c) the bribe givers cannot be certain that the bribe takers will perform the promised acts (Mauro. P. 1997) because corruption-based agreements are not legally recognized and enforceable contracts (Bardhan 1997),
- (d) the highest bribe givers might not be the most efficient and lowest cost firms. They are generally more efficient in extracting bribes themselves in other areas. In other cases, bribe paying firms reduce the quality of the products or the services to account for the increase costs, resulting in many improperly build projects,
- (e) talents are improperly allocated as they seek positions with high rent-extraction power rather than where they can be most productive (Murphy 1991),

- (f) in high corruption economies, managers spend more time interacting with officials and regulators instead of partaking in productive activities (Kaufmann 1997; Kaufmann 2000),
- (g) the bribe taking officials might not based their selection decisions on expected performance or amount of bribe paid. They might select those whom they trust as the corruption activities must be kept discreet,
- (h) the officials will favor large, non-standard, complex, expansive, and capital intensive projects because they provide more rent extracting opportunities,
- (i) this theory fails to recognize and acknowledge that corruption is really a theft of public resources and it misallocates resources from the intended beneficiaries. This improper allocation of resources impairs macro-economic and political stability, and
- (j) many public goods and services should not be allocated based on the amount of bribe that can be paid. They should be allocated based on needs of the recipients as a social service (for example, education and health care services).

**Multiple Equilibriums.** This theory proposes that there can be multiple equilibrium levels of corruption in an economy (Dawid 1996; Dabla-Norris 2000; Mauro 2002). In the simplest case, there can be two equilibriums. One in which the society is very “clean” and any corruption activities are frowned upon and severely punished. The other equilibrium occurs where the society is very corrupt. At this equilibrium, those who are not corrupt are disadvantaged and are forced to emulate.

This theory hypothesizes that governments should set policies to move from the “corrupt” equilibrium to the “clean” equilibrium. However, it takes a large amount of economic forces and political will to initiate the changes and this theory does not stipulate what policies or actions can be done to effect the migration.

## Logic Model

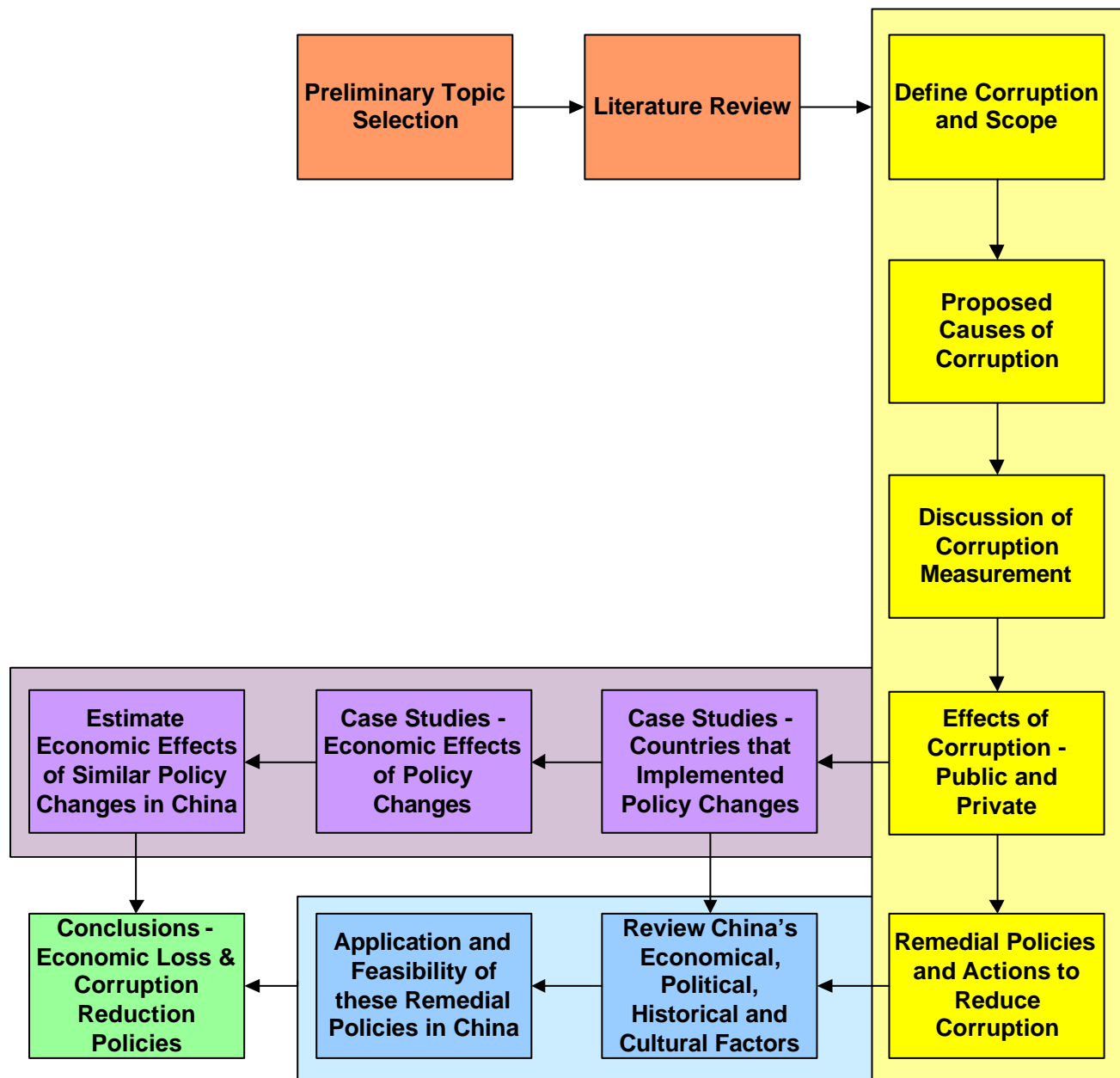
The following logic model is used for this research paper.

1. Topic selection. Corruption is one of the many topics of interest. Decision on topic selection was based on interest, availability of existing research work and their findings, and potential of contribution to the academic and practical environment.
2. Literature review. Existing literature on theoretical and empirical research on corruption are reviewed and findings summarized.
3. Definition and scope of corruption. Corruption is defined and its scope determined.
4. Causes of corruption. Proposed causes of corruption are discussed.
5. Corruption measurement. Some of the more commonly used measurements of corruption, their collection methods, and shortcomings are discussed. We will also discuss some of the proxies used to measure the effects of corruption.
6. Effects of corruption. Effects of corruption on economic development and growth based on theoretical and empirical research are discussed.
7. Economic loss due to corruption in China. A comparative case study approach is used to estimate the economic loss due to corruption in China. We will first identify countries that have successfully implemented corruption reducing policies and estimate the economic effects due to the changes. Then we will compare and account for economical, political, cultural and historical differences between these countries and China. We will then estimate the economic loss due to corruption in China using changes in other countries as reference points.
8. Policies and remedial actions. Institutional policies and remedial actions suggested in the various literature that can be implemented to reduce or prevent corruption are discussed.



9. Application of corruption reduction policies in China. We will discuss the applicability and feasibility of implementing these policies in China.

The flow chart below depicts the logic model for this research proposal.



### **Significance of Study**

This research is significant from both an academic and practical perspective for the following reasons.

- (a) This paper provides an overall discussion of the current research findings on corruption and its effects on economic growth and development. Measurement instruments, causes and cures of corruption are also discussed. This paper provides researchers with a comprehensive base from which to commence further research work.
- (b) This paper evaluates the various corruption measurements available and highlights their characteristics and shortcomings. Researchers or scholars new to the study of corruption will be more aware of the possible limitations to these corruption measurements in their research. Although we have not gone so far as to devise more suitable measurement instruments, we hope to encourage the devise of a better corruption measurement instrument if possible.
- (c) This paper tries to highlight the detrimental effects of corruption on economic development and growth, especially in a developing country context. One of the critical first steps for an effective remedial action plan is for a broad base understanding and agreement on the severity of this problem. Only then will there be sufficient momentum and political will to tackle the problem of corruption by institutional officials and the citizens.
- (d) This paper tries to quantify the economic effects of corruption in China using a case study approach. China has experienced explosive growth in foreign investments over the last several years, and it was able to maintain the level of capital capturing despite the uncertain global economic conditions. However, we believe that China is not exploring its full potential as a host country for foreign investments, and our quantitative

analysis provides an estimate of the shortfall in economic development due to corruption. We also hope that our findings will serve as a reminder to other developing countries on the importance of corruption reduction.

- (e) We discuss the various remedial policies and actions recommended in the literature in general and evaluate their suitability for application in the China context. Other developing countries can use a similar framework to derive at their own set of policy decisions.

## **Literature Review**

Corruption has become a popular subject of research over the last fifteen years as international trade blossomed. The initial research work focused on corruption in the public domain because agency problems had caused obvious violation of duties within the institutional framework in developing countries. Recent research emphasized the adverse effects of corruption on private domain issues like gross national products, foreign direct investments, and remedial policies to combat corruption. Research generally found negative correlation between the level of corruption and economic growth; the higher the level of corruption, the lower the economic growth. Empirical research is starting to uncover preliminary causal relationship between economic variables and corruption (Kaufmann 2002). At the same time, researchers are also devising institutional policies and actions that can inhibit or reduce corruption.

In this section, we will discuss (a) the definitions and scope of corruption, (b) proposed causes of corruption, (c) its measurement methodologies, (d) the effects of corruption on economic development and growth, and (e) the proposed remedial policies and actions that can reduce or inhibit corruption.

### ***Definition of Corruption***

Corruption, also called rent seeking activities by some researchers, has always been difficult to define and measure due to its nature. Corruption is usually defined as what is relevant to the topic for the research study. Precise definition of corruption was difficult to establish for several reasons. First, corruption might be defined differently dependent on the cultural or economic context. For example, gift giving is an ingrained cultural trait in Japan or corruption can be so prevalent in a country that it has become an accepted behavior. Second, corruption behavior should be judged separately from their moral value. For example, some actions might not be considered corrupt but morally wrong while some other actions might be considered corrupt but morally correct. Third, many activities fall under the grey area in which the intention of the givers must be considered.

In earlier research, corruption was usually defined under the public domain and it was defined as an abuse of public power for private benefits (Bardhan 1997; Tanzi 1998); for example, the sale by government official of government property for personal gains (Shleifer 1993). Later, the scope of corruption was expanded to include the private domain which includes the efficient use and allocation of resources, game theory analysis, effects on foreign direct investment, corporate governance, and the supply side of corruption (the bribe payers) (Vogl 1998)(Vogl, 2001 #73)(Clarke 2002). Corruption is defined as influencing someone to engage or not engage in an activity which would not occur otherwise. A summary of numerous corruption related research papers is provided in Appendix I. It is generally assumed that there is an unfair or inequitable transfer of wealth or benefits from the corruptive activities and that a small number of individuals benefited from the act while another group of individuals are detrimented.

Within the research parameter, definitions of corruption have also been segregated in various ways for theoretical analysis purposes. For example, corruption has been classified into three regimes; one in which no bribe is needed, one in which payment of bribe will ensure supply of the goods, and one in which payment of bribe does not guarantee the supply of the goods (Shleifer 1993). Corruption has also been classified into corruption with theft and without thief; corruption with theft means that the official hides the sale and the government does not receive any proceeds, while corruption without thief means that the government receives proceeds from the sale of the government property and the official also receives a bribe (Shleifer 1993). Each of these classifications is used for analytical purposes to evaluate the effects of corruption from different perspectives.

### ***Causes of corruption***

Theoretical and empirical research has discovered various factors that are correlated with corruption. Unfortunately, causality relationships cannot be confirmed in these research. A recent study has found that the degree and progress of economic and structural reforms in developing countries explains more of the economic development and growth than corruption measurements. As a result, the researcher hypothesized that corruption is only a symptom of weak institutional structures that requires reform (Abed 2000). Regardless of the causality relationship, the following factors are found to be correlated with corruption.

***Institutional Structure.*** Institutional structure that allows its officials large amounts of discretion will experience higher level of corruption. As officials have the power to deviate from the rules and the processes, they are able to extract rents by allocating governmental resources differently when bribes are received. One researcher conjectured that the level of

corruption in an economy can be affected by its age of democracy as proxy for the stability of the institutional structure (Mohtadi 2003).

**Quality of the Bureaucracy.** Some researchers have found that the lower the quality of the bureaucracy, the higher the level of corruption (Gupta 2000). The quality of bureaucracy is a subjective measurement of the quality of the institutional framework which includes the opportunities for corruption, the probability of getting caught, and the severity of the punishment.

**Rule of Law.** Some researchers have found that the stronger the rule of law in a country, the lower the level of corruption (Gupta 2000). Corrupt officials will have less incentive to extract rents if the probability of getting caught is high or if the penalty is stiff (Treisman 2000). This is particularly relevant to countries that have established formal anticorruption legislations.

**Degree of Competition and Trade Openness.** Countries that have higher degree of competition in its industrial sectors and high trade openness are associated with lower level of corruption (Ades 1999). Countries that are relatively closed and have many governmental interventions like trade restrictions, subsidies, price controls, and foreign exchange limitations and regulations are associated with higher level of corruption (Mauro. P. 1997).

**Public and Private Sector Wage Disparity.** Countries with large disparity between public and private sector wages are associated with higher level of corruption (Mauro. P. 1997; Van Rijckeghem 1997). It was hypothesized that as the government can only afford to pay its public sector employees low wages, the public sector employees resort to rent extraction to make up for the wage differences. Overtime, the government found that it can continue to pay low wages to the public sector employees and public positions are desirable because of corruption opportunities.

**Availability of Natural Resources.** It was found that a country's natural endowments are correlated with the level of corruption (Mauro. P. 1997; Leite 1999). It was hypothesized that having abundant natural resources will also require large scale projects for their extraction and refinement. These large scale, complex, and capital intensive projects provide many opportunities for corruption behavior.

**Cultural or Social factors.** Some researchers have hypothesized that family oriented cultures are more prone to corruption as family members help each other (Mauro. P. 1997). Other researchers found that high ethnolinguistic fractionalization, which measures societal divisions among ethnic and linguistic lines, are correlated with corruption (Treisman 2000).

### ***Corruption Measurements***

In order to study corruption and its effects, the first requirement is to identify and quantify corruption activities. However, there are several difficulties in identifying and quantifying corruption. First, there is a spectrum of corruption activities from outright bribe taking to gift giving. Some of these activities are more difficult to classify as they fall within a grey area of the spectrum. Second, corruption activities are seldom disclosed or recorded as they are illegal or unacceptable from a social perspective. It is in both the briber and the bribee's interest not to disclose the activity. Hence, it is difficult to have a reliable quantitative measurement of corruption activities. As a result of these measurement obstacles, corruption measurements are mainly based on subjective evaluation by experts. In most cases, experts on the local business environment or business person are given surveys on their experience of corruption for the country.

While these corruption measurements have been compiled for a number of years and they cover a large number of countries, they do have their limitations as a research tool. First,

the surveys are based on subjective evaluation, and it might be swayed by existing expectations of the experts. Second, the number of survey performed for certain countries might not be large enough for fair inferences. Third, the experts' background, experience, and job position might expose them to different levels and types of corruption. Fourth, the cultural orientation of the expert might result in different subjective ratings on corruption. Fifth, the experts' prior experience with corruption in other countries might also skew the survey results. Sixth, the coverage of countries might be limited. Seventh, regional differences in terms of geographic and cultural variations also make comparison across regional areas more difficult (Kaufmann 1999; Kaufmann 2002). One research study found that indicators for bureaucratic quality, rule of law, and corruption should only be used as an approximate measurement as the standard errors associated with the data are too high (Kaufmann 1999).

Despite these limitations, high correlations were found between corruption measurements giving them increased reliability as measurement instruments. The table below outlines some of the measurements used for corruption and other variables.

Variables	Measurements
<b>Corruption</b>	<ul style="list-style-type: none"> <li>▪ Transparency International Corruption Perception Index (CPI) (Lambsdorff 1998)</li> <li>▪ International Country Risk Guide (ICRG)</li> <li>▪ Political Risk Services</li> <li>▪ Business International (BI) Index</li> <li>▪ International Financial Statistics (IFS)</li> <li>▪ World Bank World Development Report / World Development Indicators</li> <li>▪ World Bank World Business Environment Survey (WBES)</li> <li>▪ Global Competitiveness Survey</li> <li>▪ World Competitiveness Report</li> <li>▪ German Exporter Index</li> <li>▪ Standard &amp; Poor</li> <li>▪ Gallup International</li> <li>▪ Expenditure Tracking Surveys (PETS) - measures corruption through leakages in the system, in particular for health care and education systems (Reinikka 2002)</li> <li>▪ Quantitative Service Delivery Survey (QSDS) - measures corruption through leakages in the system, in particular for health care and education systems (Reinikka 2002)</li> </ul>
<b>Government Control</b>	<ul style="list-style-type: none"> <li>▪ Foreign exchange premium in black market as proxy for level of economic distortion by government (Brunetti 2001)</li> </ul>



Variables	Measurements
	<ul style="list-style-type: none"> <li>Ratio of import and export to GDP to measure openness to trade (Brunetti 2001)</li> <li>Ethno-linguistic fractionalization - measures ethnic diversity (La Porta 1999)</li> <li>Gini Coefficient - measures income inequality</li> <li>Education attainment (Rajkumar 2002)</li> <li>FDI friendliness – self constructed list of administrative procedures to start an FDI operation (Morisset 2002)</li> <li>Fraser Institute survey (Friedman 2000)</li> <li>Heritage Foundation survey (Friedman 2000)</li> <li>Freedom House survey (Friedman 2000)</li> </ul>
<b>Quality of Governance</b>	<ul style="list-style-type: none"> <li>KKZ Indicator - Kaufmann, Kraay, and Zoido-Lobodan (KKZ) indicators of quality of governance in their 1999 paper (Kaufmann 1999; Kaufmann 2002; Kaufmann 2003)</li> <li>Electricity consumption – measures unofficial activities (Friedman 2000)</li> <li>Multiple-indicator multiple cause process – measures unofficial activities (Friedman 2000)</li> <li>Use of cash - measures unofficial activities (Friedman 2000)</li> <li>Political Risk Services bureaucratic quality indicator (Rajkumar 2002)</li> <li>Credit Lyonnais Securities Asia (CLSA) - ranking of corporate governance of various firms in developing countries by CL's analyst (Klapper 2002)</li> </ul>
<b>Transparency and Information Flow</b>	<ul style="list-style-type: none"> <li>Freedom House free press indicator (Brunetti 2001)</li> <li>ICRG Indicators – extent of state ownership of press and TV and newspaper circulation (Islam 2003)</li> <li>Freedom of Information Act - existence of Freedom of Information Act within the country's law indicates more transparency (Islam 2003)</li> <li>Frequency of disclosure - a self constructed instrument that evaluates the frequency and lag of disbursement of key government information. Developed nation is used as the benchmark for comparison, and a score is produced to indicate transparency (Islam 2003)</li> </ul>
<b>Public investments</b>	<ul style="list-style-type: none"> <li>IMF Government Finance Statistics (GFS) (Tanzi 1997)</li> <li>World Development Indicators on public health spending (Rajkumar 2002)</li> <li>UNESCO World Education Report</li> </ul>
<b>Structural reform</b>	<ul style="list-style-type: none"> <li>EBRD - 3 measurements of structural reform (Abed 2000)</li> </ul>

### ***Effects of corruption***

Corruption affects activities in both the public and the private domains. The public domain includes activities performed by the government for the public good. It includes the administration of government functions like trade and business development, taxation, social welfare, and defense. The private domain includes activities performed by local or foreign non-governmental entities. It includes natural resources, manufacturing, trading of goods and services, and financial services.

## Effects of Corruption on Public Spending and Finance

***Reduce Overall Growth and Output.*** Corruption reduces overall economic growth and output due to inefficient allocation of public and private resources (Shleifer 1993; Mauro 1995; Mauro. P. 1997; Gupta 1998). Talents and human capital are also misallocated as those with abilities choose positions that can extract rents rather than positions that they can be most productive (Murphy 1991). One recent study found causal relationship between good governance and growth while corruption acts as a symptom of weak governance (Kaufmann 2002).

***Increased Social Disparity.*** Corruption results in a transfer of wealth from the general population to a small group of individuals (Gupta 1998). Most often, the poor or the sick of the society are being disadvantaged in the process as funds allocated to social programs for their benefits are misdirected. They are also the least powerful in terms of political visibility and effects. As a result, the disparity between the disadvantaged and the wealthy increases over time.

***Political and Economical Instability.*** As disparity between the rich and the poor increases, social or political instability in the form of civil unrest or revolution might result. During periods of instability, resources are directed towards the maintenance of order rather than for economic development. In addition, an unstable political system increases the perceived risk of the country from the perspective of foreign investors. One research suggested that corruption changes the composition of foreign investments between equity and bank loans that could increase the probability of currency crisis (Wei 2000).

***Reduced Effectiveness of Public Policies.*** Government officials design, plan and implement public policies based on certain assumptions on the policies' effects on the society. However, corruption distorts or skews the effects of these public policies, making them less effective (Gupta 2000). Corruption adds another layer of uncertainty to the policy

maker's design and implementation process (Mauro. P. 1997). Corruption also increases the level of unofficial activities (underground activities) making outcome of policies less certain (Friedman 2000).

**Reduced Government Revenue.** Corruption reduces governmental revenue from taxes, licenses, fees and fines (Mauro. P. 1997). Corruption reduces governmental revenue directly when officials accept bribes to reduce the amounts payable to the government. Corruption also reduces governmental revenue indirectly by slowing economic growth. Slower economic growth results in less business activities and a smaller income base for the government to derive its income (Tanzi 1997; Johnson 1999). Corruption and burden of bureaucracy are found to cause activities to move "underground" (Friedman 2000) further reducing the government's tax base.

**Negligence of Health Care and Educational Services.** In developing countries, health care and educational services provide the most long-term societal benefits. Health care services provide the economy with healthy work force and preventive services can reduce future medical spending. Educational services increase the literacy level of the work force and increase the country's international competitiveness (Mauro. P. 1997). Unfortunately, these two types of services also provide the least amount of corruption opportunities. As a result, neglect of health care and educational services are very common in developing countries (Gupta 2000; Robalino 2001). Research has found that the efficacy of public spending on health care and education are related to the level of corruption and quality of bureaucracy. It was found that the higher the level of corruption and the lower the quality of the bureaucracy, the lower the marginal benefits from increase in health care or education spending (Rajkumar 2002).

**Neglect of Existing Capital Assets.** Some researchers have found that many new capital projects are started even though the existing facilities are more than adequate if they are

given proper operating and maintenance (O&M) services. However, new capital projects are started because they provide more opportunities for corruption than recurring annual spending on O&M services (Tanzi 1997).

***Investment in “White Elephant” Projects.*** Research have found that officials in countries with high level of corruption are more likely to invest in large projects that are complex, high cost, custom configured, and capital intensive because they provide more opportunities for corruption (Mauro. P. 1997; Tanzi 1997). Examples include projects for power plants, highways, military equipments, and facilities like chemical and petrochemical plants and refineries.

***Overinvestment in Military Facilities.*** Military facilities and information are often classified as highly important and are seldom disclosed to the public in details. This lack of transparency reduces the probability of detection. Accountability is also reduced as decisions are usually made through the chain of commands. In addition, military projects are usually highly complex and evaluation of success difficult. Research has found that corruption is positively correlated with the level of military spending (Gupta 2000).

### **Effects of Corruption on Private Investments**

Corruption is found to adversely affect local and foreign private investments through several means.

***Make Investments Unattractive.*** Corruption reduces returns, increases risk, and magnifies uncertainty of investments for both local and foreign investors, making investments less attractive. Corruption increases the monetary and other direct and indirect costs of investments and reduces their returns. Increase risk and uncertainty are the more detrimental effects of corruption (Wei 1997). In most countries, the payment of bribes does not guarantee that the investment can proceed successfully, hence greatly increases the

completion risk. Investors can never be certain of their total costs and returns, making analysis impossible and greatly increases the investment risk.

***Corruption as an Uncertain Tax Levy.*** Some researcher has equated corruption as a government imposed tax which affects both local and foreign investments (Wei 2000). Unlike government taxes, the total amounts of bribes required to complete a project is uncertain, making evaluation more difficult (Mauro. P. 1997; Wei 1997). As a result, corruption is more akin to a tax levy with an uncertain rate.

Government imposed taxes and corruption also differ in one important aspect. For government imposed taxes, the government receives the proceeds and can use it for social purposes. For corruption, only selected officials receive the benefits and it will be used for private purposes. Some of the corruption gains might also be hidden offshore, reducing the benefits of increased velocity of money flow in the local economy.

***Corruption Smothers Small Businesses and Reduce Growth.*** Small businesses are found to be the main driver of economic growth, especially in developing countries (Choi 2003). Small businesses also employ a majority of the people in many economies. Research has found that corruption is proportionally more costly for small businesses than large businesses. Small businesses also have to devote more time to overcome bureaucratic barriers. In addition, corruption acts as a tax and is harmful for innovations because it inhibits risk-taking behaviors (Bardhan 1997). It can be concluded that the adverse effects of corruption are more severely felt by small businesses (Tanzi 2000; Beck 2002). As small businesses suffer due to corruption, they will contribute less growth to the economy.

***Reduce Foreign Investments.*** Most of the foreign investment flows from developed nations to developing countries. Generally, developed nations have lower level of corruption than developing countries. Research has found that managers from lower corruption

countries have a lower propensity to invest in countries with higher corruption (Wei 2000; Habib 2002) probably due to unfamiliarity with the process. Hence, just having a comparatively higher level of corruption might cause foreign investment to be reduced (Morisset 2002; Wei 2002). Foreign investors might also be put off by the requirement to spend incremental time to negotiate with corrupt officials and the higher cost of capital that they might face (Kaufmann 2000). Although some research have found that corruption does not affect foreign investments directly (Habib 2001), corruption does reduce the number of small businesses that generally serves as a support base for foreign investment projects. This lack of support system might deter foreign investments.

### ***Remedial Policies and Action to Reduce Corruption***

Many policies and governmental actions have been recommended to reduce corruption and they can be classified into three broad categories. They can be classified as (a) administrative and legal remedies that limits the discretion of public officials through rules and regulations, (b) transparency and standards that promotes good governance, and (c) fundamental economic reforms that give rise to corruption in the first place (Abed 2000).

### **Administrative and Legal Remedies through Rules and Regulations**

***Reduce Discretions.*** It has been hypothesized that the more discretion public officials have, the easier it is for them to engage in rent extracting activities. When officials can change the relevant rules and regulations on their own, they will be tempted to extract bribes in order to influence their actions. Hence, reducing the amount of discretion that public officials have should reduce the opportunities for corruption (Kaufmann 1997). Government can also increase the uniformity of the tax and tariff structure to reduce the discretion of officials and their ability to extract bribes. Although the government will lose its

ability to differentiate taxpayers' ability to pay, a uniform tax structure will result in higher total tax revenue if corruption is prevalent (Gatti 1999).

***Increase Penalty for Corruption.*** It has been proposed that higher penalty for corruption should act as deterrence for corruption because the cost of getting caught for corruption is higher (Treisman 2000). It should also serve a preventive role to deter potential corruption situations if the participants are aware of the severe penalties (Leite 1999).

***Establish Official Independent Anticorruption Agency.*** Some researchers have proposed that the establishment of an official and independent anticorruption agency can reduce the level of corruption in a country. The Independent Commission Against Corruption ("ICAC") of Hong Kong and the Corrupt Practices Investigation Bureau ("CPIB") of Singapore (Kaufmann 1997) are commonly cited as an effective corruption deterrence body. For the agency to perform its task effectively, it must be independent, possesses the proper authority from the government, and be able to impose the appropriate level of penalties. Policies that protect the informants should be established to encourage reporting of corruption activities (Abed 2000).

### **Transparency and Standards That Promotes Good Governance**

***Increase Institutional Transparency.*** Many research have found that increase transparency of institutional process and results can reduce corruption (Lederman 2001; Reinikka 2002; Islam 2003). For example, more timely and widely distribution of relevant government information reduces the information disparity between officials and citizens. Distribution and availability of public media like newspaper circulation, public radio and television stations also facilitates information dissemination (Brunetti 2001; Lederman 2001). Auctioning off projects in a public forum also reduces opportunities to extract bribes (Kaufmann 1997). The public information reduces the discretion available to the officials

and makes them more accountable for their actions. The probability of getting caught is also higher as there are benchmarks and information available publicly to judge their effectiveness as public officials.

***Discourage Corrupt Practices By Investors.*** It was proposed that investing firms from developed nations should be encouraged not to participate in any corrupt practices (Donaldson 1996; Vogl 1998). If investing firms can coordinate and refuse to partake in any corruption activities, then it would be difficult for government officials to extract rent (Kaufmann 1997). The anticorruption code of OECD in the US making bribery illegal is an effort to reduce corruption from the supplier / bribe payer side (Cockcroft 1996; Hamra 2000). The US even passed law that make bribes paid to foreign officials illegal; it was formerly thought of as the responsibilities of the host government. Unfortunately, the problems of game theory exist in which countries or firms that continue to pay bribes might have an unfair advantage over the other non-paying competitors in securing contracts or business transactions.

### **Fundamental Structural and Economic Reforms**

***Reform and Decentralization of Fiscal and Other Policies.*** Some researchers have found that a decentralization of finance will help reduce corruption as the institutional officials are more accountable for their actions and outcome of decisions (Fisman 2002). One study even found high fiscal decentralization to be associated with lower mortality rates (Robalino 2001). The general public is also able to vote to change the officials if they are dissatisfied with their performance. The key concept is accountability (Gurgur 2000) and ability of the public to make a choice in changing the official (Wei 2001; Reinikka 2002; Caselli 2003). Other areas of reform include simplifying the tax and tariff systems, reform of public expenditure management systems, price liberation, and market based allocation of



resources (Kaufmann 1997). While these policies might work in a theoretical sense, the proper conditions must exist for it to be adopted and be effective. In countries with high level of corruption, a thorough reform of the institutional structure might be required (Kaufmann 2003).

***Provision of Government Services on a Competitive Basis.*** Some researchers have proposed that the provision of government services on a competitive basis can reduce corruption as the bribe payment is competed away (Lederman 2001). Several conditions must be met for this policy to be effective. First, the officials must be prevented to form collusion. Second, the officials must be required to issue effective licenses and not just pocket the fees and issue a fake license. Third, there should be some limits on entry and exit of officials for stability reasons. Fourth, the officials must be prevented by selling their official titles. Fifth, there should be wide dissemination of information to the public of the available multiple sources of the governmental goods and services.

***Promote Privatization.*** It was found that privatization of government services can reduce corruption (Kaufmann 1997). After the privatization process, the service is offered to the public through a for-profit firm with which any remaining profits belongs to the owners of the firm. As such, the owners of the firm will have an inherit interest to reduce cost in order to increase profits. This streamlining of processes will ensure that the services are provided most cost efficiently, hence reducing many of the opportunities for corruption. On the other hand, the initial privatization process might lead to an unstable environment within which more corruption opportunities might exist (Mohtadi 2003).

***Higher Salary for Government Officials.*** Some researchers hypothesized that corruption allows government officials to supplement their formal income, allowing governments to reduce their general salary outlays (Van Rijckeghem 1997). As a result, these researchers proposed that increasing the salary of government officials or the use of bonus system

(Chand 1997) can reduce corruption. If the government officials are receiving the market or above market rate of salary when compared to the private sector, they will have less incentive to solicit or accept bribes. There is a higher opportunity cost to future lost wages if an official is caught with corruption and loses his job. Singapore is frequently used as an example of a country with relatively high salary level for government officials and low level of corruption. However, the causality relationship has not been confirmed and there are three implementation issues for this policy. First, many developing countries have tight budget constraints that prevent them from raising the salary level of government officials. There is simply not enough money in the budget. Second, there will be extremely high political pressure when government official salary levels are increased but social spending on health care or education do not change. Third, many developing countries are already employing a much larger pool of governmental employees that are necessary to provide employment opportunities and alleviate the unemployment situation. The distribution of wealth will be unfairly skewed if non-essential governmental employees are receiving high salaries for low contribution work.

## **Corruption in China**

Using a comparative case study approach, this research proposal aims to quantify the economic effects of corruption and proposes feasible remedial policies that can reduce the level of corruption in China.

### ***Economic Effects of Corruption in China***

The economic effects of corruption are generally very difficult to quantify due to the nature of corruption and its measurement. In addition, the indirect effects of corruption and opportunity cost of inefficient resource allocation are impossible to value. As a result, we

will utilize a comparative case study approach to quantitatively estimate the economic effects of corruption in China.

By looking through academic journals and other publications, we will locate studies, research, articles, and information on countries that have undergone institutional reforms and have evaluated and quantified the economic change due to different levels of corruption. For example, the World Bank estimated that about 5% of exports to developing countries or US\$50 to US\$80 billion goes to corrupt officials each year (Hamra 2000), the general level of bribes has increased from 5% of contract price to 20% to 30% (Andelman 1998), and Transparency International estimated that petty corruption amounted to 1% of economic output in Mexico in 2001. Another article in the Wall Street Journal detailed the anti-corruption drive of the city of Moron, Argentina. The mayor of Moron increased transparency, reduced discretion, standardized many governmental procedures, opened up government services to competitive bidding, and set up an independent anti-corruption office. As a result, the city's printing costs decreased by 75%, hospital maintenance expenses dropped by 35%, and garbage-collection fees fell by 35% (Moffett 2003). We will contact the researchers and writers of these articles and studies for more detailed information on the quantitative economic changes due to change in level of corruption.

Based on these studies, we will perform a comparative analysis between the countries in the studies and China to evaluate their political, economic, historical and cultural differences. Based on these differences, we will estimate the economic effects of similar anti-corruption policies when applied in the China context. Based on the estimates, the economic effects of corruption on China can be extrapolated and derived quantitatively.

### ***Corruption Reduction Policies***










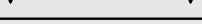



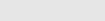

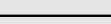

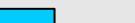


Using case studies on anti-corruption measures that were implemented in other countries and interviews with experts in China, we will try to evaluate corruption-reducing policies that are feasible and applicable in China. The current political and economic environmental conditions will be taken into account, and the recommendation is based on cost benefit analysis of each policy. The potential improvements to the economy of each policy are judged against its feasibility under the current political regime and applicability to the institutional framework.

We expect that the following policies will be most applicable and feasible for China:

- (a) broad and thorough institutional reforms,
- (b) reduce discretion of institutional agents,
- (c) open and fair competitive bidding by suppliers for provision of governmental supplies and services,
- (d) increase transparency of government operations and results,
- (e) promote privatization of government operations, and
- (f) establish independent anti-corruption agencies.

## Time Table

The research is expected to take 9 months. The time table below outlines the timing of each step in the logic model.

ID	Task Name	Data Collection / Analysis Methods	2003								2004			
			Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	
1	Planning and Introduction													
2	Preliminary topic selection													
3	Literature review	Secondary Data												
4	Define corruption and scope of research	Secondary Data												
5	Detailed Discussion of Topics													
6	Effects of corruption													
7	Research findings													
8	Corruption measurement methodology													
9	Policies and measures that reduce corruption													
10	Case Study Analysis - Economic Loss in China													
11	Identify countries that have implemented corruption reduction policies	Secondary data												
12	Identify economic effects of policies	Secondary data												
13	Comparison of country characteristics with China	Pattern Matching Explanation Building												
14	Estimate economic loss in China due to corruption	Secondary data												
15	Formulation of Corruption Reduction Policy													
16	Review of China's economical, political, historical and cultural background	Pattern Matching Explanation Building												
17	Applicability and feasibility of corruption reduction policies in China	Pattern Matching Explanation Building												
18	Conclusions													
19	Case study analysis on economic loss													
20	Corruption reduction policies in China	Pattern Matching Explanation Building												

## **Expected Conclusions**

Based on case study results of corruption reduction policies in other countries and estimates provided by the various agencies and other research studies, we expect that China is sustaining significant economic loss due to corruption. We estimate that China is losing  $x\%$  (US\$ X billion) of its recurring revenue base and  $y\%$  (US\$ Y billion) of its investments due to corruption.

Based on our analysis of country specific factors, we expect to find that (a) a broad and thorough institutional reforms, (b) reduced discretion of institutional agents, (c) a competitive basis of public service provision to the public, (d) higher transactional transparency, (e) increased privatization, and (f) the establishment of an independent anticorruption body are the most effective corruption reduction policies for China.

We also expect to find that for corruption-reducing policies to be effective, they must be country specific as each country has its own unique historical, cultural, political and economic development.

## **Limitations of the Research Project**

This research project has several limitations.

### ***Measurement Errors***

One of the more important limitations on corruption research is the existence of measurement error. Measurement error arises from several sources.

*Definition of Corruption.* The definition and scope of corruption differs among researchers resulting in different basis of analysis. While some researchers focus on corruption in the public sector by institutional employees, other researchers analyze the effects of corruption

on investment and economic activities. Our case study analysis might utilize cases that have different definition of corruption.

*Corruption Measurements.* Corruption activities are generally discreet and there is no official accounts of the amounts, extend, and persuasiveness of corruption. Most of the current corruption measurements are based on subjective rating of experts. However, the subjective view of the experts might not be representative of the actual corruption level in the country. In addition, the number of survey for each country is small and large deviations exist in the ratings. The measurements also do not specify the types of corruption the experts are evaluating; there are low-level and high-level corruptions or well-organized and poorly organized corruption. These shortcomings result in validity and reliability issues (Kaufmann 1999) despite high correlations being found between the measurement instruments.

*Benchmark Measurements.* The effects of corruption on economic development are measured using various proxy measurements. For example, electricity consumption are used to proxy for economic development, delays and frequency of release of government information are used to proxy for availability of information, or the state ownership of media as proxy for information transparency. A summary list of these proxy measurements is provided in the Corruption Measurement section. These proxies for economic development might not be good surrogates as measurement of economic activities.

*Interactive Nature of Variables.* Corruption and other institutional policies, characteristics and variables interact with each other and they are not independent. There can also be multiple causality relationship between these variables as well. Hence corruption cannot be evaluated in isolation and researchers should try to formulate ways to account for the relevant and significant variables in their research.

*Timeliness.* The most commonly used corruption measurements require preparation time and they might be outdated when published. Fortunately, while countries can improve their institutional systems, nature of corruption activities in a society takes longer time to change and that provides corruption measurement a longer “shelf life.”

### ***Causal Relationship***

*Economic Effects.* While most studies have found negative relationship between corruption and economic growth, only a few studies were able to infer the causal relationship between the two (Kaufmann 2002). The unresolved causal relationship is a particularly important limitation for practical policy making application as policy makers must know the causal relationship to make effective policy decisions.

*Time Lag.* Most of the studies tried to find correlations between corruption and factors that proxy economic growth in the same year. However, corruption develops over time and there are likely to be time lag when policy decisions are implemented. The length of the time lag might also vary between countries due to different historical, social, economical and political development. This time lag factor should be taken into account in the study of corruption.

### ***Generalizability***

Ability to generalize the research findings to other situations or countries (external validity) is another limitation of this research proposal. As countries have their unique historical and economic development, political systems, and cultural differences, the findings might not be generalizable to other countries.



### ***Application and Feasibility of Our Recommendations***

While we have recommended policies that can reduce corruption in China, we cannot provide assurance that they will be effective. Our recommendations are starting points for reforms and adaptations are required before implementation.

### **Conclusion**

This research proposal provides a comprehensive literature review on the definition of corruption, its causes and measurements, its effects on economic growth and development, and remedial policies and actions that can reduce corruption. The next step in the process is to commence the collection of case studies of economies that have implemented corruption reduction policies and quantified their economic effects. The case study analysis can be used as a starting point to extrapolate and derive the economic effects of corruption in China. The same case studies can also be used to formulate corruption reduction policies that are feasible and applicable within the China context.

## Appendix

### Appendix 1 Summary of Research Findings

Author	Date and Publication	Title and Summary
G. Abed H. Davoodi	IMF Working Paper, WP/00/132, July 2000	<p><b>Corruption, Structural Reforms, and Economic Performance in the Transition Economies</b></p> <p><i>Summary:</i> found that structure reforms have higher correlation to growth and other economic factors than corruption.</p> <p><i>Highlights:</i> hypothesize that corruption is only a symptom of weak institutional structure, and empirical data confirm stronger correlation between structure reform and growth and development than corruption.</p>
A. Ades	American Economic Review, 89, 4, 9-99, 982-993	<p><b>Rents, competition and corruption</b></p> <p><i>Summary:</i> found that countries that are more open to foreign trades are generally less corrupt.</p>
P. Bardhan	Journal of Economic Literature, 35, 9-97, 1320	<p><b>Corruption and Development: A Review of Issues</b></p> <p><i>Summary:</i> overall review of corruption and its effects.</p>
T. Beck A. Demirguc-Kunt V. Maksimovic	World Bank Policy Research Working Paper February 2002	<p><b>Financial and Legal Constraints to Firm Growth: Does Size Matter?</b></p> <p><i>Summary:</i> found that financial, legal and corruption issues adversely affect firm growth, and small firms most adversely affected.</p> <p><i>Highlights:</i> the study used a firm-level survey via World Business Environment Survey (WBES) of the World Bank, World Development Indicators, International Financial Statistics (IFS) database as source of input data.</p>
A. Brunetti B. Weder	Journal of Public Economics, 2001	<p><b>A free press is bad news for corruption</b></p> <p><i>Summary:</i> found significant relationship between more press freedom and less corruption.</p> <p><i>Highlights:</i> Good general discussion on corruption and press freedom, use of various ways to proxy for press freedom.</p>
F. Caselli M. Morelli	Journal of Public Economics, May 2003	<p><b>Bad politicians</b></p> <p><i>Summary:</i> discuss several effects based on quality of government position holders.</p>
S. Chand K. Moene	IMF Working Paper, WP/97/100, August 1997	<p><b>Controlling Fiscal Corruption</b></p> <p><i>Summary:</i> Corruption can be reduced by using fiscal incentives, restructured systems and reformed official structure.</p>
J. Choi M. Thum	Journal of Public Economics, 87, 2003, 427-443	<p><b>The dynamics of corruption with the ratchet effect</b></p> <p><i>Summary:</i> when public officials cannot discriminate between entrepreneurs in a multiple period framework, the entrepreneur will have the incentive to delay entry in order to pay a lower rent in a</p>

Author	Date and Publication	Title and Summary
		subsequent period. <i>Highlights:</i> practice of job rotation can help mitigate corruption.
G. Clarke L. Xu	World Bank, February 2002	<b>Ownership, Competition, and Corruption: Bribe Takers versus Bribe Payers</b> <i>Summary:</i> the research studied characteristics of bribe paying and bribe taking firms in the utilities industry.
L. Cockcroft	Business Strategic Review, 7, 3, 1996, 30-39	<b>Transnational Bribery: Is it Inevitable?</b> <i>Summary:</i> provides overview of actions that had been taken by developed nations to reduce corruption.
E. Dabla-Norris	IMF Working Paper WP/00/106, June 2000	<b>A Game-Theoretic Analysis of Corruption in Bureaucracies</b> <i>Summary:</i> models a two-tier government hierarchy, and there might be two or more equilibrium conditions.
H. Dawid G. Feichtinger	Journal of Economics, 64, 2, 1996, 177-193	<b>On the Persistence of Corruption</b> <i>Summary:</i> featured a dynamic model of rational agents such that there can be two equilibrium in a social-economic system. One in which corruption is common and prevalent and one in which corruption is rare.
T. Donaldson	Harvard Business Review, September-October 1996	<b>Values in Tension: Ethics Away from Home</b> <i>Summary:</i> multinationals should play a part in formulating solutions to reduce corruption.
R. Fisman R. Gatti	Journal of Public Economics, 83, 2002, 325-345	<b>Decentralization and corruption: evidence across countries</b> <i>Summary:</i> found that high fiscal decentralization in government expenditure is associated with lower corruption. <i>Highlights:</i> provides a good overview of the effects of decentralization on corruption and a good summary of the various corruption measurements.
E. Friedman S. Johnson D. Kaufmann P. Zoido-Lobaton	Journal of Public Economics, 76, 2000, 459-493	<b>Dodging the grabbing hand: the determinants of unofficial activity in 69 countries</b> <i>Summary:</i> found that high tax rates do not led to higher unofficial (underground) activities; instead, corruption and burden of bureaucracy are more associated with high level of unofficial activities. <i>Highlights:</i> use of electricity consumption, multiple-indicator multiple cause, and use of cash to measure unofficial activities. The paper also describes a diverse set of information database collected to measure the level corruption and the ease of doing business.
R. Gatti	World Bank Policy Research Working Paper, November 1999	<b>Corruption and Trade Tariffs, or a Case for Uniform Tariffs</b> <i>Summary:</i> when corruption is pervasive, total government revenue from tariff might be higher if a uniform tariff rate is set by limiting the ability to extract bribes.
S. Gupta	IMF Working Paper, WP/98/76, May 1998	<b>Does Corruption Affect Income Inequality and Poverty?</b> <i>Summary:</i> finds that higher level of corruption is associated with

Author	Date and Publication	Title and Summary
H. Davoodi R. Alonso-Terme		higher income inequality and poverty by reducing economic growth, the progressivity of the tax system, the level and effectiveness of social spending, and unequal distribution of assets.
S. Gupta H. Davoodi E. Tiongson	IMF Working Paper, WP/00/116, June 2000	<b>Corruption and the Provision of Health Care and Education Services</b>  <i>Summary:</i> corruption adversely affects the provision of social benefits by increase the cost, decreasing the volume, and lower the quality of publicly provided services like health care and education services.
S. Gupta L. de Mello R. Sharan	IMF Working Paper, WP/00/23, February 2000	<b>Corruption and Military Spending</b>  <i>Summary:</i> corruption is associated with higher military spending.  <i>Highlights:</i> military related information are often secretive and not transparency, and military spending are often subject to large discretions by officials.
T. Gurgur A. Shah	World Bank November 2000	<b>Localization and Corruption: Panacea or Pandora's Box</b>  <i>Summary:</i> found that decentralization increase accountability in the public sector and reduce corruption.
M. Habib L. Zurawicki	International Business Review, 10, 2001, 687-700	<b>Country-level investments and the effect of corruption – some empirical evidence</b>  <i>Summary:</i> supports negative relationship between corruption and investments, but found that effects of corruption on local investment is weaker. Also found that degree of international openness and political stability moderates the influence of corruption.
M. Habib L. Zurawicki	Journal of International Business Studies, 33, 2, 2002, 291-307	<b>Corruption and Foreign Direct Investment</b>  <i>Summary:</i> found negative relationship between FDI and (i) level of corruption in host country, (ii) absolute difference in level of corruption between host and home country.
W. Hamra	Business Economics, October 2000	<b>Bribery in International Business Transactions and the OECD Conventions: Benefits and Limitations</b>  <i>Summary:</i> a general discussion of corruption and the effects of the OECD Conventions.
R. Islam	World Bank Policy Research Working Paper 3077, June 2003	<b>Do More Transparent Governments Govern Better?</b>  <i>Summary:</i> found that countries that have better flow of governmental information have higher quality governance.  <i>Highlights:</i> used Freedom of Information Act and a self-devised measure of information dissemination to proxy transparency.
D. Kaufmann	8 <sup>th</sup> International Anti-Corruption Conference, 1997	<b>Economic Corruption: Some Facts</b>  <i>Summary:</i> provides a general overview of the effects of corruption, and types and effectiveness of various types of reforms.
D. Kaufmann S. Wei	IMF Working Paper, WP/00/64, March 2000	<b>Does 'Grease Money' Speed Up the Wheels of Commerce?</b>  <i>Summary:</i> using three worldwide firm surveys, found that bribery does not provide the "grease-the-wheel" effect. Instead, it found that management spend more time with bureaucrats in negotiating

Author	Date and Publication	Title and Summary
		regulations (not less) and the firms has a higher cost of capital. <i>Highlights:</i> the main assumptional differences in this paper is that corruption is not exogenous. Hence, officials ask for more bribes when a company can pay more.
D. Kaufmann A. Kraay	The World Bank, July 2002	<b>Growth Without Governance</b> <i>Summary:</i> found strong causal effect from good governance to higher per capita income but not the reverse. Conclude that governance can lead to growth. <i>Highlights:</i> able to provide one of the first causal relationship empirical studies leading from governance to growth.
D. Kaufmann A. Kraay	World Bank, February 2003	<b>Governance and Growth: Causality which way? Evidence for the World, in brief</b> <i>Summary:</i> found evidence that in countries with high level of corruption, much broader agenda of institutional reforms are required.
D. Kaufmann A. Kraay P. Zoido-Lobaton	The World Bank Policy Research Working Paper, October 1999	<b>Governance Matters</b> <i>Summary:</i> cross-sectional study of over 150 countries and found strong causal relationship from better governance to better development outcomes. <i>Highlights:</i> the authors reviewed over 300 governance indicators from various sources and compiled into six aggregate indicators for governance.
D. Kaufmann A. Kraay P. Zoido-Lobaton	The World Bank Policy Research Working Paper, October 1999	<b>Aggregating Governance Indicators</b> <i>Summary:</i> prepared summary indicators for bureaucratic quality, rule of law, and graft using numerous individual indicators for 160 countries. <i>Highlights:</i> indicators can only be used as a general approximation of the measured variables because the measurement instruments are not well-developed yet and the variables are difficult to measure in the first place.
D. Kaufmann A. Kraay P. Zoido-Lobaton	The World Bank Policy Research Working Paper, February 2002	<b>Governance Matters II: Updated Indicators for 2000/01</b> <i>Summary:</i> updates to a cross-sectional study that included over 300 indicators into 6 aggregate indicators on quality of governance.
D. Kaufmann A. Kraay P. Zoido-Lobaton	The World Bank Policy Research Working Paper, May 2003	<b>Governance Matters III: Governance Indicators for 1996 - 2002</b> <i>Summary:</i> updates to a cross-sectional study that included over 300 indicators into 6 aggregate indicators on quality of governance. The paper also provided a more detailed discussion on methodological issues and interpretation and use of the data. Estimated margins of errors are also provided.
L. Klapper I. Love	World Bank Policy Research Working Paper 2818, April 2002	<b>Corporate Governance, Investor Protection, and Performance in Emerging Markets</b> <i>Summary:</i> found that (i) firm-level governance is lower in countries with weaker legal systems, (ii) firm-level governance is correlated with the extent of asymmetric information and contracting imperfections that firms face, (iii) better corporate governance is

Author	Date and Publication	Title and Summary
		highly correlated with better operating performance and market valuation, and (iv) firm-level corporate governance provisions matter more in countries with weak legal environments.  <i>Highlights:</i> used a relatively objective survey by Credit Lyonnais Securities Asia to measure corporate governance, the paper also includes a summary list of the questions used in the survey.
J. Lambsdorff	Transparency International Working Paper	<b>Corruption in Empirical Research – A Review</b>  <i>Summary:</i> provides a summary of findings of research on corruption.
J. Lambsdorff	Transparency International Working Paper	<b>1998 Corruption Perceptions Index: Framework Document</b>  <i>Summary:</i> provides information on methodology and sources used for Transparency International's Corruption Perception Index (CPI).
D. Lederman N. Loayza R. Reis Soares	World Bank Policy Research Working Paper November 2001	<b>Accountability and Corruption: Political Institutions Matter</b>  <i>Summary:</i> found that political institutions, in particular, democracies, parliamentary systems, political stability and freedom of the press, are all associated with lower corruption.  <i>Highlights:</i> discussion of political competition, existence of checks and balances, transparency, and structure of the system for the provision of public goods are the main determinants of the level of corruption.
N. Leff	The American Behavioral Scientist, 8, 2, 1964, 8-21	<b>Economic Development Through Bureaucratic Corruption</b>  <i>Summary:</i> grease-the-wheel in a bureaucratic institutional framework to better match demand with supply for more efficient allocation of resources.
C. Leite J. Weidmann	IMF Working Paper WP/99/85, July 1999	<b>Does Mother Nature Corrupt? Natural Resources, Corruption, and Economic Growth</b>  <i>Summary:</i> formulated that newly discovered natural resources will increase level of corruption, and discussed four major determinants of the extent of corruption. The paper also proposed two anticorruption policies – institution building are more suitable for developing economies, while stricter enforcement are more suitable for developed countries.  <i>Highlights:</i> summary discussion on role of corruption in economic growth and the determinants of corruption.
F. Lui	Journal of Public Economics, 94, 4, 1985, 760-781	<b>An Equilibrium Queuing Model of Bribery</b>  <i>Summary:</i> bribery enables the sorting of demand to supply by allowing those with the highest demand (and highest propensity to pay larger bribes) to receive the goods or services ahead of those with lesser demands.
P. Mauro	Quarterly Journal of Economics, 110, 3, 1995, 681	<b>Corruption and Growth</b>  <i>Summary:</i> found that corruption lowers total investment and lowers economic growth, taking into account endogeneity factors.
P. Mauro	IMF Economic Issues, February 1997	<b>Why Worry About Corruption?</b>  <i>Summary:</i> general overview of causes and effects of corruption.

Author	Date and Publication	Title and Summary
P. Mauro	IMF Working Paper WP/02/213, November 2002	<b>The Persistence of Corruption and Slow Economic Growth</b> <i>Summary:</i> formulated two models involving strategic complementarities and multiple equilibria so that there can be a low corruption equilibrium and a high corruption equilibrium.
H. Mohtadi T. Roe	Journal of Public Economics, 87, 2003, 445-466	<b>Democracy, rent seeking, public spending and growth</b> <i>Summary:</i> found that young and mature democracies have high growth rate and low rent seeking activities, while democracies in the medium stage of development towards democracies have low growth and high level of rent seeking activities. Hypothesize that there are more opportunities for rent seeking when the democratization process is starting or progressing.
J. Morisset O. Lumenga Neso	World Bank Policy Research Working Paper, May 2002	<b>Administrative Barriers to Foreign Investment in Developing Countries</b> <i>Summary:</i> administrative costs to entry and operate via foreign direct investment vary greatly between countries, and high administrative costs tend to discourage FDI. The level of administrative cost is positively correlated with the level of corruption, but negatively with quality of governance, degree of openness and public wages. <i>Highlights:</i> developed a comprehensive list of administrative procedures to start an operation under FDI arrangement.
A. Rajkumar V. Swaroop	World Bank Policy Research Working Paper, May 2002	<b>Public Spending and Outcomes: Does Governance Matter?</b> <i>Summary:</i> found that public spending on health care and education are more efficacy when level of corruption is low and quality of bureaucracy is high.
R. Reinikka J. Svensson	World Bank Policy Research Working Paper 3071, June 2003	<b>Survey Techniques to Measure and Explain Corruption</b> <i>Summary:</i> recommends the use of expenditure tracking surveys (PETS) and quantitative service delivery survey (QSDS) to measure corruption through leakages in the system, found that political reform and regulation systems restructuring must be complemented by increase transparency, monitoring, and ability to challenge abuses. <i>Highlights:</i> two alternative more micro-based corruption measurement methods.
D. Robalino O. Picazo A. Voetberg	World Bank Policy Research Working Paper, March 2001	<b>Does Fiscal Decentralization Improve Health Outcomes? Evidence from a Cross-Country Analysis</b> <i>Summary:</i> found that higher fiscal decentralization is associated with lower mortality rates, especially for poor countries.
A. Shleifer R. Vishny	The Quarterly Journal of Economics, 108, 3, August 1993, 599-617	<b>Corruption</b> <i>Summary:</i> discussed two reasons why corruption is costly to economic development. Too many independent bribe taking agents might make many worthwhile and profitable projects too costly to proceed and corruption might improperly shift resources to projects that provide more opportunities for rent extraction.
V. Tanzi H. Davoodi	IMF Working Paper, WP/97/139 October 1997	<b>Corruption, Public Investment, and Growth</b> <i>Summary:</i> large scale corruption by government agents distorts the perceived benefits of large scale infrastructure projects under weak auditing institutions. The study also found high corruption to be

Author	Date and Publication	Title and Summary
		<p>associated with (i) higher public investment, (ii) lower government revenues, (iii) lower expenditures on operations and maintenance, (iv) lower quality of public infrastructure.</p> <p><i>Highlights:</i> corruption easier in large scale infrastructure projects, and O&amp;M are neglected. Use of measure for public investment and quality of public infrastructure. Good reasoning that connects corruption to nature of projects.</p>
V. Tanzi	IMF Staff Papers, 45,4, December 1998	<p><b>Corruption Around the World: Causes, Consequences, Scope, and Cures</b></p> <p><i>Summary:</i> this paper provides an exceptional discussion on the definition, reasons, causes, characteristics, consequences and scope of corruption; the paper also discussed some remedies to reduce corruption.</p>
V. Tanzi H. Davoodi	IMF Working Paper, WP/00/182, November 2000	<p><b>Corruption, Growth, and Public Finance</b></p> <p><i>Summary:</i> this paper discussed the various literature and empirical research being performed on corruption and growth (enterprise growth, investment and allocation of talent) and corruption and public finance (composition of public spending and tax structure).</p> <p><i>Highlights:</i> comprehensive summary discussion of how corruption affects growth and public finance.</p>
D. Treisman	Journal of Public Economics, 76, 2000, 399-457	<p><b>The causes of corruption: a cross-national study</b></p> <p><i>Summary:</i> found that religion traditions, colonial history, stage of economic development cause corruption.</p>
C. Van Rijckeghem B. Weder	IMF Working Paper, WP/97/73, June 1997	<p><b>Corruption and the Rate of Temptation: Do Low Wages in the Civil Service Cause Corruption?</b></p> <p><i>Summary:</i> testing of the fair wage model and the shirking model for the level of civil service wages and level of corruption, results support the shirking model but inconclusive.</p>
F. Vogl	Finance & Development, June 1998	<p><b>The Supply Side of Global Bribery</b></p> <p><i>Summary:</i> corruption reduction should be evaluated from the supply side of corruption as well.</p>
F. Vogl	Transparency International	<p><b>The Supply-Side and the Demand-Side of Corruption: Background to the BPI and the CPI</b></p> <p><i>Summary:</i> provides background information and methodology for Transparency International's CPI.</p>
S. Wei	National Bureau of Economic Research, Working Paper 6255, November 1977	<p><b>Why is corruption so much more taxing than tax? Arbitrariness kills</b></p> <p><i>Summary:</i> found significant negative effects of corruption on foreign investment as corruption-induced uncertainty increases.</p>
S. Wei	The Review of Economics and Statistics, 82, February 2000, 1-11	<p><b>How Taxing is Corruption on International Investors?</b></p> <p><i>Summary:</i> found that a rise in tax rate or level of corruption in a host country reduces inward foreign direct investment.</p>



Author	Date and Publication	Title and Summary
S. Wei	NBER Reporter, Spring 2000	<b>Local Corruption and the Global Economy</b> <i>Summary:</i> found that corruption significantly deters investment and economy growth. Study also suggest that corruption could increase the probability of a currency crisis by changing the composition of the country's capital inflows.
S. Wei	Economic Survey of Europe, 2, 2001, 101	<b>Corruption in Economic Development: Grease of Sand</b> <i>Summary:</i> hypothesized that corruption can lead to decreased globalization in a country and corruption reduction requires comprehensive institutional reforms.
S. Wei	Brookings Institution, 2002, 2, 303-354	<b>Local Corruption and Global Capital Flows</b> <i>Summary:</i> found that corruption reduces the volume and composition of capital inflow in developing countries. The study included proper accounting of governments' policies towards FDI.

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