Dark deals and dampened destinies: corruption and economic performance

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''If you look under most banking crises, there's always a degree of fraud and abuse, and there's often a large amount of criminal activity. Corruption threatens growth and stability in many other ways as well: by discouraging business, undermining legal notions of property rights and perpetuating vested interests.''

Lawrence Summers,
Deputy Secretary of the Treasury
Speech to Summit of the Eight, Denver, June 10, 1997

The Asian crisis, and the crises that followed in Russia and Brazil elicited strong prescriptions for therapy from international organizations, such as the IMF and the World Bank, and forceful recommendations from US Treasury Department officials and many of the world's leading economists. The principal area identified for reform was fiscal fundamentals. Surprisingly, disagreements among the organizations and experts about what should be done were significant, and often sharply worded and loudly voiced.[1]

'Control corruption' was a second prescription for the nations in crisis. Here there was widespread agreement among the leading commentators and actors, almost all of whom were Americans, and shared the American anathema – some would say prissiness – to corrupt practices. Corruption and cronyism were frequently identified as underlying causes of the crisis in the troubled economies. A number of the same sorts of firm-government, firm-bank, or firm-firm relationships that were previously described as critical ingredients of social capital, or were portrayed metaphorically as the engine of the East Asian growth,

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[1] This disagreement would have reduced the performance of whatever policies would have been adopted. In democracies, political factions tend to unite, or at least muffle their dissent, when choosing tactics for wars. Perhaps economists should do the same when confronting overseas economic crises.

now became labeled corrupt or crony practices.[2] A number of critics, particularly in Asia, complained that the corruption proscribers were both excessively self-righteous and dabbling in the internal affairs of other nations. What is the evidence for the proposition that corruption affects a country's economic performance and development? Is corruption a minor annoyance or major obstacle, or might it even be a valuable economic lubricant? We provide empirical evidence on these questions, looking principally towards the experience of Asia[3]. To avoid contamination by extreme events, we focus on the period prior to 1997.

1. Corruption and economic development

In assessing corruption, one man's beneficial grease is another man's malignancy.

''In terms of economic growth, the only thing worse than a society with a rigid, over-centralized, dishonest bureaucracy is one with a rigid, over-centralized and honest bureaucracy''.

Samuel P. Huntington, *Political Order in Changing Societies*, 1968, p. 386
''We need to deal with the cancer of corruption. . .''.
James Wolfensohn, President, The World Bank, *Transition*, p. 9, September/October 1996

Such discordant statements about corruption are read and heard from time to time, and one can find anecdotes to support any or all of them. (Economists cannot agree on fiscal remedies, an area where they have done a great deal of work, but they are relatively united in condemning corruption, a subject they have studied but little.) We examine facts and data to see whether and how corruption impairs economic performance.

We focus on corruption in the economic sphere involving government officials. Such corruption involves government officials' abusing their power to extract, attract, or accept bribes from the private sector. We distinguish economic corruption involving government from political corruption, such as vote-buying in an election or illegal campaign contributions, and from bribes between private sector parties. We start with a discussion on measuring the relative degree of corruption across countries.

2. Measurement

Inflation and unemployment are hard to measure, corruption triply so. Its very nature – secretive, illegal, highly variable across different economic activities and occurring in no

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[2] The term 'crony capitalism' is frequently employed, some times for alliterative flourish, but at others to take a sly gibe at the capitalist system. The term seems a misnomer, since such corrupt cronyism seems at least as widespread in China, Russia, and India, as in more free-market, i.e., more capitalistic nations, at equivalent stages of development.

[3] Piror studies on the consequences of corruption include Kriedger (1974), Rose-Ackerman (1975, 1978, 1998a, 1998b), Lui (1985), Andvig (1991), Shleifer and Vishny (1993, 1994) Tanzi (1995, 1998), Hines (1995), Ades and Di Tella (1997), Bliss and Di Tella (1997), Bardhan (1997), Elliot (1997), Kaufmann (1997a, 1997b), Gupta et al. (1998).

natural quantity unit – makes it impossible to obtain precise information on its extent within a country. Accordingly, a precise grading of countries according to their relative degree of corruption is not possible.

Still one can get useful information on the seriousness of corruption in a country by surveying experts or firms within it. Corruption, like many illegal activities, may be difficult to quantify, but you know it when you see it. There are several survey-based measures of 'corruption perception' that are increasingly available. We use three of them in our analyses below.

2.1. Business international (BI) index

This index is based on surveys of experts and consultants (typically one respondent per country) conducted during 1980–1983 by Business International, now a subsidiary of the Economist Intelligence Unit. It ranks countries from one to ten, according to "the degree to which business transactions involve corruption or questionable payments."

2.2. Global competitiveness report (GCR) index

The GCR index is based on a 1996 survey of firm managers, rather than experts or consultants. Sponsored by the World Economic Forum (WEF), a Europe-based consortium with a large membership of firms, and designed by the Harvard Institute for International Development (HIID), this survey asked the responding firms about various aspects of 'competitiveness' in the host countries where they invest. A total of 2381 firms in 58 countries answered the question on corruption, which asked the respondent to rate the level of corruption on a one-to-seven scale according to the extent of "irregular, additional payments connected with import and export permits, business licenses, exchange controls, tax assessments, police protection or loan applications." The GCR corruption index for a particular country is the average of all respondents' ratings for that country.

2.3. Transparency international (TI) index

This index has been produced annually since 1995 by TI. This international non-governmental organization is dedicated to fighting corruption worldwide. The index is based on a weighted average of approximately ten surveys of varying coverage. It ranks countries on a one-to-ten scale.

As a survey of surveys, the TI index has both advantages and disadvantages. If the measurement errors in different surveys are independent and identically distributed, the averaging process used to produce the TI index may reduce the measurement error; if not, statistical validity is questionable. Moreover, since different surveys cover different subsets of countries, the averaging process may introduce new measurement errors when cross-country rankings are produced. Finally, since the TI indexes in different years may be derived from different sets of surveys, they should not be used to measure changes in a country's corruption level over time.

Table 1
Corruption ratings for selected countries[a]

	BI (1-10 scale)[b]	TI 97 (1-10 scale)	GCR97 (1-10 scale)
Asian countries			
Singapore	1	2.34	1.84
Hong Kong	3	3.72	2.31
Japan	2.25	4.43	2.50
Taiwan	4.25	5.98	3.43
Malaysia	5	5.99	5.01
S. Korea	5.25	6.71	5.50
Thailand	9.5	7.94	6.13
Philippines	6.5	7.95	7.98
China	n.a.	8.12	6.73
India	5.75	8.25	7.32
Indonesia	9.5	8.28	8.40
Pakistan	7	8.47	n.a
Bangladesh	7	9.20	n.a.
Non-Asian countries			
Canada	1	1.90	1.84
United Kingdom	1.75	2.72	1.71
Germany	1.5	2.77	1.92
United States	1	3.39	2.11
France	1	4.34	2.77
Mexico	7.75	8.34	5.83
Kenya	6.5	8.70	7.08
Colombia	6.5	8.77	6.81
Russia	n.a.	8.73	7.08
Nigeria	8	9.24	7.83

[a] See the text immediately preceding the table for sources on BI, TI, and GCR indices.

[b] In the original BI, TI, and GCR indices, small numbers imply more corruption. All the indices in the table have been rescaled so that large numbers imply more corruption. For BI and TI indices, the values in the table = 11−original scores; and for the GCR index, the values in the table = 1 + (7−original value)*3/2.

Table 1 shows the BI, TI, and GCR indices for a subset of countries[4]. In the original indices, large numbers refer to low corruption or, to put matters positively, cleanliness (e.g. the BI-index value for Singapore is 10). To avoid awkwardness in interpretation, we rescale all the indices in Table 1 so that low values imply low corruption (e.g., the rescaled BI index value for Singapore is 1). To facilitate comparisons, we have rescaled the GCR ratings from their original 1–7 range to the 1–10 range in the table.

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[4] Another useful corruption rating is International Country Risk Guide (ICRG) Index. This index has been produced every year since 1982 by Political Risk Services, a private international investment risk service. The ICRG corruption index is apparently based on the opinion of experts and is supposed to capture the extent to which "high government officials are likely to demand special payments" and to which "illegal payments are generally expected throughout lower levels of government" in the form of "bribes connected with import and export licenses, exchange controls, tax assessments, police protection, or loans." Because the ICRG index is proprietary, we cannot display the values here.

While these indices derive from people's perceptions, as opposed to objective measures of corrupt activities, they are useful in an analysis such as this, which sketches the effects of corruption broadly. For many questions such as how corruption affects foreign investment, perception is what actually matters. Second, despite the very different sources of the surveys, the pairwise correlations among the indices are very high. For example, the correlations between the BI and TI indices and between the BI and GCR indices are 0.88 and 0.77, respectively (Wei, 1997b). These high correlations suggest that statistical inference on the consequences of corruption will not be sensitive to the choice of corruption index.

3. Economic consequences of corruption

In this section, we review some recent studies that examine the consequences of corruption on various aspects of economic development. Wherever possible, to facilitate compatibility, we illustrate the results of these studies using examples from Asian countries.

3.1. Domestic investment

The literature suggests that investment as a percentage of GNP responds strongly to the level of corruption within a nation. In a regression of the total investment/GDP ratio, averaged over 1980–1985, on a constant and the 10-point corruption index (BI), the slope was 0.012 (Table IV, in Mauro, 1995, p. 696). This implies that a three point decrease in corruption, the approximate difference between the Phillipines and Taiwan, would cut this ratio by 3.6 percentage points. As a yardstick, the mean total investment/GDP ratio for Asian nations during this period was between 20 and 30 percent.

3.2. Foreign direct investment

In examining a data set of bilateral foreign direct investment in the early 1990s from 14 major source countries to 41 host countries, Wei (1997a) found clear evidence that corruption in host countries significantly discourages foreign investment. His regressions yielded respective coefficients on corruption and host country tax rate of −0.09 and −1.92. A simple calculation shows the impact of such effects. Using the point estimates in Wei's paper and the BI corruption ratings in Table 1, if India could reduce its corruption level to the level in Singapore, the benefit in attracting foreign investment would be the same as reducing its tax rate by 22 percentage points [$=(5.75 - 1) \times 0.09/(0.01 \times 1.92)$].

Many Asian countries offer substantial tax incentives to lure multinational firms to locate in their countries. For example, China offers all investing foreign firms an initial 2-year tax holiday plus 3 subsequent years of half of the normal tax rate. This research suggests that these Asian countries would attract substantially more foreign investment without giving up any taxes if they could get corruption under control.

Contrary to a cursory reading of the news, many Asian nations have not been investment magnets. For example, after accounting for its size, proximity to major source countries,
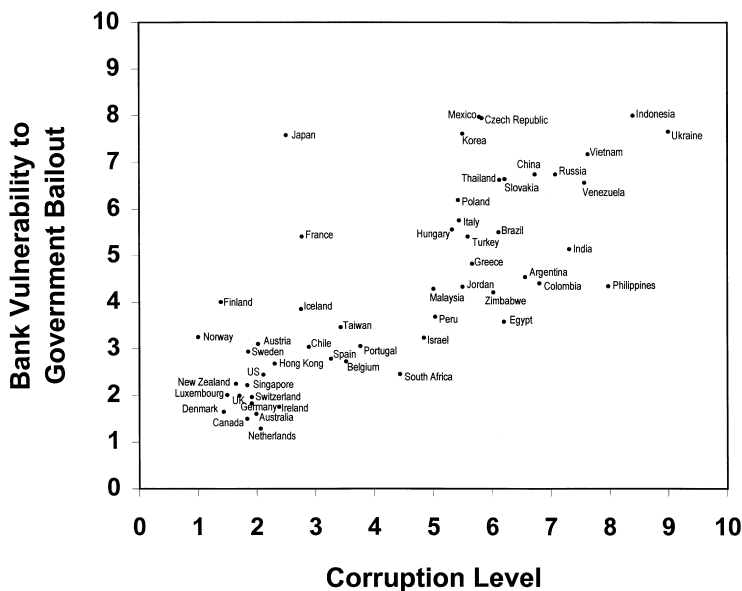
Fig. 1. Corruption and bank vulnerability.

and other factors, China is an underachiever as a host of direct investment from five major source countries, the U.S., Japan, Germany, the United Kingdom, and France (Wei, 1998). High corruption in China, no doubt, provides part of the explanation.

3.3. Financial market performance

The financial sectors in many of the countries experiencing recent economic crises have been weak. Might corruption be implicated? Using survey-based measures, Wei and Sievers (1999) found clear patterns: countries that are perceived to be corrupt tend to have inadequate regulation and supervision of banks, and also have banking systems that are vulnerable to government bailout.

Based on information from the Global Competitiveness Report, perceived level of corruption, perceived bank vulnerability, and inadequacy of financial regulation are ranked on 1–10 scales, where high numbers are bad (more corruption, weak banks, and inadequate regulation)[5]. We use two figures to tell our story, where corruption level is placed on the horizontal axis. Fig. 1 shows that countries with more corruption tend to have more vulnerable banks. Fig. 2 shows that, countries with more corruption also tend to have less adequate regulation and supervision of financial institutions.

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[5] Source: 1998 Global Competitiveness Report, jointly produced by the World Economic Forum and HIID. We have re-scaled the variables from the original 1–7 scale where high numbers are good to the 1–10 scale where high numbers are good. New value = 1 + (7−original value)*3/2.
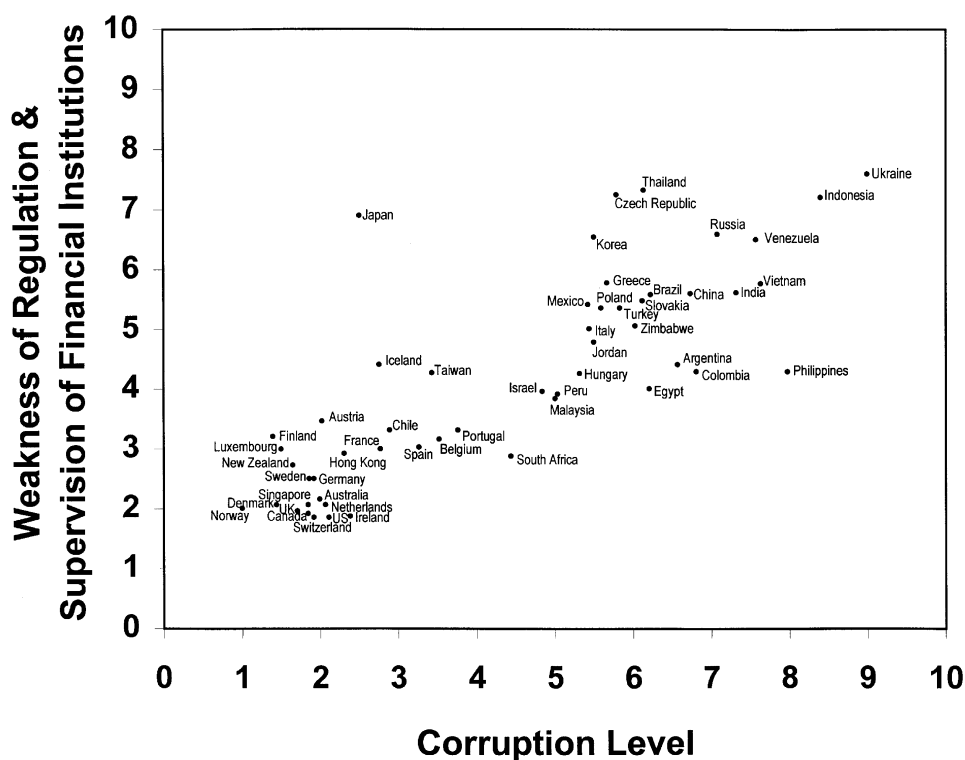
Fig. 2. Corruption and bleakness of financial regulation.

The rank order correlation coefficients in the two figures are 0.77 and 0.82, respectively.[6] Both correlation coefficients are more than five times the standard deviation (0.139) away from zero[7], implying extreme significance. What causes what? Does corruption lead to ineffective regulation or a weak financial sector? Does inadequate regulation breed corruption? A variety of relationships are posited in the literature. Fig. 3 portrays graphically several possible causal relationships among our three variables. The triangle is labeled with positive attributes, e.g., cleanliness as opposed to corruption, to ease discussion. It is sometimes alleged that corruption leads to tight regulations – which then can be relaxed at a price. For example, building codes are often ridiculously strict, but the inspector can readily overlook violations for a small bribe. Our evidence suggests that this phenomenon does not predominate in the banking sector. Supervision is stricter where government is cleaner, and the level of supervision in corrupt nations is far from excessive.

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[6] Rank orders avoid the need to make any assumptions about the underlying distributions.

[7] The standard deviation under the null hypothesis of independence between two rank series is given by $1/\sqrt{n-1}$, where $n =$ number of observations, which is 53 in our case.
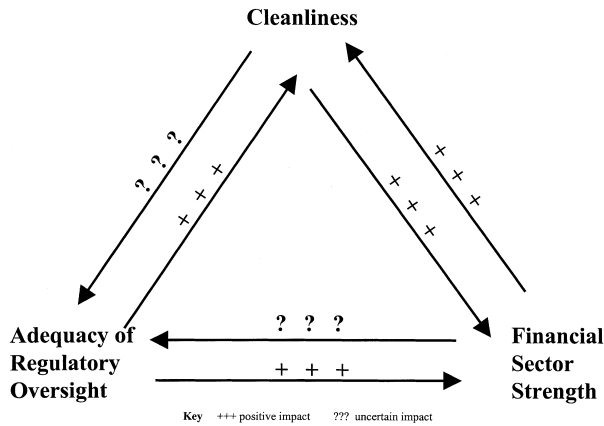
Fig. 3. Hypothesized relationships among cleanliness, regulatory oversight, and financial sector strength.

In an analysis not shown, we found that financial strength is strongly positively correlated with the strength of regulatory oversight. It is conceivable that strong banks push for weak oversight, but if so they do not do so with sufficient energy to overcome the ability of strong oversight to bolster banks. Moreover, to the extent that banks need to worry about externalities of vulnerability (when one bank fails it tends to draw others with it) or reputational externalities (when depositors learn of one weak bank they think others are weak as well), responsible banks would benefit from strong oversight. Finally, a strong oversight regime will work to the competitive advantage of strong banks, which will not have to make as many costly adjustments as their weaker competitors to come into compliance.

3.4. Economic growth

If corruption reduces investment by both domestic and foreign firms, it should also reduce the economic growth rate. Mauro (1995) examined how the conditional growth rate (that is, the growth rate given the country's starting point and size) is affected by corruption. He found a significant negative relationship.

To illustrate the magnitudes involved, we utilize his point estimates for the effects of corruption on economic growth.[8] If Bangladesh were able to reduce its corruption to Singapore's level, a six point reduction, its average annual per capita GDP growth rate over 1960–1985 would have been higher by 1.8 percentage points ($=0.003 \times (7-1)$). This translates to a more than 50% boost in 1985 per capita GDP.[9]

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[8] See Column 6 of his Table VII.

[9] This 50 percent gain would apply as long as Bangladesh's growth over this period was less than 5 percent annually. Mauro also employs an instrumental variables approach. His numerical estimate increases, but the significance of the relationship falls to 15 percent.

3.5. Size and composition of government expenditure

Corruption has the potential to affect the pattern of government expenditures. We posit that corrupt nations spend more monies in areas where big gains to potential bribers are available, implying the flow of more money to officials as well.

Tanzi and Davoodi (1997) systematically studied the effect of corruption on a government's expenditure pattern. Five important findings emerge: First, corruption tends to increase the size of public investment at the expense of private investment, because many items in public expenditure lend themselves to manipulations by high-level officials seeking bribes. Second, corruption skews the composition of public expenditure away from needed operation and maintenance toward expenditure on new equipment.[10] Third, corruption tilts the composition of public expenditure away from needed health and education funds, because these expenditures, relative to other public projects, offer less easy pickings for rent extraction.[11] Fourth, corruption reduces the productivity of public investment and of a country's infrastructure. Finally, the effects on government revenues are ambiguous (Kaufmann and Wei, 1998). Corruption is a force for evasion, and thus would seem to reduce revenues. However, corrupt officials have an incentive to set taxes high (which increases the potential value of their corrupt behavior), the net effect is unclear.

We illustrate some of the Tanzi–Davoodi findings by looking at the effect of a change in corruption on a variety of indicators, averaged over 1980–1995. An increase in corruption from the Singapore level to the Pakistan level would increase the public expenditure/GDP ratio by 1.6 percentage points (column 2 of Tanzi-Davoodi's Table 1); and reduce the government revenue/GDP ratio by 10 percentage points (column 2 of Tanzi–Davoodi's Table 2). Hence, more corruption is associated with a larger government deficit. An increase in corruption reduces the quality of roads, and increases the incidence of power outages, telecommunication failures, and water losses. An increase in corruption from the Singapore level to the Pakistan level would increase roads in bad condition by 15 percent, after controlling for a country's level of development and its public investment to GDP ratio (column 2 in Table 5).

3.6. Does corruption 'Grease' the wheels of commerce?

What of the 'virtuous bribery' hypothesis? Some – like the distinguished political scientist Samuel Huntington, quoted at the beginning of the paper – say that bribes often work as 'grease' that can speed the wheels of commerce. In a country that is rife with bad and heavy regulations, the opportunity to offer bribes to circumvent bad government control brings a measure of deregulation, and hence can be good.

Kaufmann and Wei (1998) argue that this view is true only when the bad regulation and official harassment are taken as exogenous to the corruption. But officials often have plenty of leeway to decide how much to harass individual firms. For example, tax inspectors may be able to over-report taxable income (see Hindriks et al., 1998). Fire inspectors can decide

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[10] Previous work by Klitgaard (1990) had documented this pattern.

[11] Mauro (1997) found equivalent results.

how frequently they need to come back for fire safety checks in a given period. Using data from a survey of nearly 2400 firms in 58 countries, Kaufmann and Wei show that, even within a country, managers of the firms that pay more bribes on average waste *more* time negotiating with government officials. It is likely that there was, on average, a disadvantage to those paying bribes as well as to the society in general. This evidence suggests that any 'beneficial grease' from corruption does not overcome harassment that corruption engenders.

4. Conclusions

Systematic recent research conducted by a number of authors finds that the more corrupt a country, the slower it grows. Corruption hinders economic development in several ways. It reduces domestic investment and foreign direct investment, and fosters overblown government expenditure. It distorts the composition of government expenditure away from education, health, and the maintenance of infrastructure, toward less efficient public works projects, such as highway construction, which offer greater corruption potential (also see Klitgaard, 1990). We provide reinforcing evidence for these conclusions, drawing on the Asian experience.

As Fig. 3 illustrates, some see corruption as a result of weak institutions, not a primary cause. But our empirical evidence shows that the net effect of corruption is strongly negative. Together, these findings suggest that the fight against corruption has to proceed on multiple fronts. While laws and law enforcement are indispensable, countries that are serious about fighting corruption should also pay attention to reforming the role of government in the economy, particularly in those areas that give officials discretionary power in distributing resources (Wei, 1997b). Such areas are hotbeds for corruption.

A number of measures have been proposed to fight corruption. Greater transparency about corporate operations and financial dealings is widely supported in policy circles. However, demanding a little more transparency could prove counterproductive, for firms would then take special actions to hide unsavory dealings in unmonitored variables. To what extent transparency helps, and how much is needed, is an empirical question. But many measures to fight corruption have already been proven. Recruiting and promoting civil servants on a merit basis, and paying them a salary competitive to private sector alternatives, helps to attract and retain high-quality, moral civil servants (Rauch and Evans, 1997; Van Rijckeghem and Weder, 1997). International pressure on corrupt countries, including criminalizing bribing foreign officials by multinational firms, is useful.[12] On one finding, virtually all critics are agreed. The success of any anticorruption campaign ultimately requires significant reform of domestic institutions in currently corrupt countries, and strong political will by citizens of those countries to create clean government.

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[12] According to Kaufmann and Wei (1998), because international anti-corruption treaties enhance the firms' ability to resist bribery demand, not only bribery may fall, but also harassment by rent-seeking officials could also fall in equilibrium.

References

Ades, Alberto, Di Tella, Rafael, 1997. National champions and corruption: Some unpleasant interventionist arithmetic. The Economic Journal 107(443), 1023–1042.

Andvig, Jens Christopher, 1991. The economics of corruption: A survey. Studi Economici 43, 57–94.

Bliss, Christopher, Di Tella, Rafael, 1997. Does competition kill corruption? Journal of Political Economy 5(105), 1001–1023.

Bardhan, Pranab, 1997. Corruption and development: A review of issues. Journal of Economic Literature 35(3), 1320–1346.

Elliot, Kimberly Ann (Ed.), 1997. Corruption and the Global Economy, Institute for International Economics, Washington, DC.

Gupta, Sanjeev, Davoodi, Hamid, Alonso-Terme, Rosa1, 1998. Does Corruption Affect Income Inequality and Poverty? IMF Working Paper, 97/76, International Monetary Fund, Washington DC.

Hindriks, Jean, Keen Michael, Muthoo, Abhinay, 1998. Corruption, Extortion and Evasion, Facultes Notre-Dames de la Paix, Belgium, University of Essex, England, and Institute for Fiscal Studies, London, unpublished, (first version, July 1996).

Hines, James Jr., 1995. Forbidden Payment: Foreign Bribery and American Business After 1977, NBER Working Paper 5266.

Kaufmann, Daniel, 1997a. The Missing Pillar of a Growth Strategy for Ukraine: Institutional and policy reform for private sector development. In: Cornelius, Peter K., Lenain, Patrick (Eds.), Ukraine: Accelerating the Transition to Market, International Monetary Fund, Washington, pp. 234–275.

Kaufmann, Daniel, 1997b. Corruption: The Facts. Foreign Policy, Summer. 114–131.

Kaufmann, Daniel, Wei, Shang-Jin, 1998. Does Grease Payment Speed Up the Wheels of Commerce? World Bank and Harvard University, unpublished.

Klitgaard, Robert, 1990. Tropical Gangsters, Basic Books New York.

Kriedger, Anne O., 1974. The political economy of rent-seeking society. American Economic Review 64(3), 291–303.

Lui, Francis, 1985. An equilibrium queuing model of bribery. Journal of Political Economy 93(4), 760–781.

Mauro, Paolo, 1995. Corruption and growth. Quarterly Journal of Economics 110, 681–712.

Mauro, Paolo, 1997. The Effects of Corruption on Growth, Investment, and Government Expenditure: A Cross-Country Analysis. In: Elliott, Kimberly Ann (Ed) 1997, Corruption and the Global Economy, Institute for International Economics, Washington DC. 1997.

Rauch, James E., Evans, Peter B., 1997. Bureaucratic Structure and Bureaucratic Performance in Less Developed Countries. University of California-San Diego and University of California-Berkeley, unpublished.

Rose-Ackerman, Susan, 1975. The Economics of Corruption. Journal of Public Economics 4(2), 187–203.

Rose-Ackerman, Susan, 1978. Corruption: A Study in Political Economy, Academic Press, New York.

Rose-Ackerman, Susan, 1998a. Bribes and Gifts. In: Ben-Ner, Avner, Putterman, Louis (Eds.), Economics, Values, and Organization, Cambridge University Press, Cambridge.

Rose-Ackerman, Susan, 1998b. Corruption and development. In: Pleskovi, Boris, Stiglitz, Joseph (Eds.), Annual World Bank Conference on Development Economics, The World Bank, Washington DC.

Shleifer, Andrei, Vishny, Robert W., 1993. Corruption. Quarterly Journal of Economics 108, 599–617.

Shleifer, Andrei, Vishny, Robert W., 1994. Politicians and firms. Quarterly Journal of Economics 109, 995–1025.

Tanzi, Vito, 1995. Corruption, arm's length relationships, and markets. In: Fiorentini, Gianluca, Peltzman, Sam (Eds.), The Economics of Organized Crimes. Cambridge University Press, Cambridge, pp. 161–180.

Tanzi, Vito, 1998. Corruption Around the World: Causes, Consequences, Scope and Cures, IMF Working Paper 98/63. International Monetary Fund, Washington DC.

Tanzi, Vito, Davoodi, Hamid, 1997. Corruption, Public Investment, and Growth, IMF Working Paper 97/139. International Monetary Fund, Washington.

Van Rijckeghem, Caroline, Weder, Beatrice, 1997. Corruption and Rate of Temptation: Do Low Wages in the Civil Service Cause Corruption? IMF Working Paper 97/73, International Monetary Fund, Washington, DC.

Wei, Shang-Jin, 1997a. How Taxing is Corruption on International Investors? The National Bureau of Economic Research Working Paper 6030.

Wei, Shang-Jin, 1997b. Why is Corruption So Much More Taxing Than Tax? Arbitrariness Kills. The National Bureau of Economic Research Working Paper 6255.

Wei, Shang-Jin, 1998. Why Does China Receive So Little Foreign Direct Investment? Paper prepared for the Ninth East Asian Seminars on Economics, organized by Takatoshi Ito and Anne O. Krueger, in Osaka, Japan.

Wei, Shang-Jin, Sievers, Sara, 1999. The Cost of Crony Capitalism, The Asian Competitiveness Report, Geneva: World Economic Forum, pp. 50–55.