The Impact of Corruption on a Country's FDI Attractiveness:
A Panel Data Analysis, 1984-2004

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Some argue that foreign investors would not be attracted to countries where uncertainty induced by arbitrariness in corruption, is pervasive. On the other hand, it is contended that MNEs have been seeking the investment opportunities where they can exploit rent benefits, so they would not mind paying a small price for the big gain. Consequentially, theory cannot provide us with the dominant framework to hypothesize the relationship between the corruption and the FDI attractiveness of host countries. Empirical results of this study suggest that corruption generally causes a harmful effect on attracting FDI.

1. INTRODUCTION

Recently, the governance problems of countries in transitional periods have renewed interest for both scholars and practitioners in finding out what kind of relationship exists between corruption and economic performance. The World Bank (2000) calls for immediate and practical strategies to reduce corruption levels by noting the harmful effects of corruption on economic growth and social stability. Also, as corruption has become a major challenge to the governance in many countries, it is also now on the policy agenda of many governmental and international agencies (USAID 2005).

According to Wei (1999), corruption is a major obstacle for economic growth in many ways. Corruption hinders economic development by reducing domestic investment, discouraging foreign direct investment, encouraging overspending in government, and distorting the composition of government spending. Corruption is believed not only to hurt the static efficiency but also to discourage investment, which is considered an important factor for economic growth, especially for those countries in dire need of the capital accumulation. Consequentially, policy prescriptions have been made for countries to reduce the level of corruption to attract more FDI. Actually, this argument has been confirmed by a number of previous studies.

While some researchers (e.g., Mauro 1995) have argued and confirmed that economic growth is barely possible in corrupted countries because high corruption hinders domestic and foreign investment, although there are also counterarguments against that. Bayley (1966) argues that "corruption in developing nations is not necessarily antipathetic to the development of modern economic and social systems; that corruption serves in part at least a beneficial function in developing societies" (719). Huntington (1968) also contends that "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, honest bureaucracy (386)." What both Bayley (1966) and Huntington (1968) argue is that in developing countries where cumbersome regulation is pervasive, corruption may actually improve efficiency and help growth. Until the 1997 financial crisis, some Southeast Asian countries seemed to provide

evidence that corruption actually helped economic growth. Indonesia, Thailand, and other countries were often used as examples. According to Tanzi (2002), those countries have been said to grow fast in spite of—or even because of—a high level of corruption. Those countries also have attracted a considerable flow of foreign capital (Campos et al. 2001).

Even though Bayley (1966) and Huntington (1968) do not test their argument, their arguments have some insights when we consider the strategic behavior of multinational enterprises (MNEs). Those MNEs have been seeking better places to invest their capital resources. MNEs will choose a specific country or region based on their expectation about the location-specific conditions.[1] Among many factors included in the location-specific conditions, favorable macroeconomic, microeconomic, and FDI-specific government policies are important for the MNEs because these factors are related to how well they can exploit their advantages. According to Li and Resnick (2003), it would increase the probability of those states being chosen as the FDI destination if the host government provides preferential treatment for the MNEs. Thus, from the MNEs' points of view, corruption would not matter as long as the host government secures their benefit from their investment. Even more, MNEs are ready to pay a small price for the big gain. MNEs might favor the corrupted government when they have to deal with risky investment environments because they can "buy" favorable governmental policies. Tarzi (1991) also argues that MNEs would try to form and help allied local groups maintain their advantages. If this is the case, MNEs might prefer those countries where "individual leaders … were known to accept private payments in exchange for their efforts to preserve status quo (Tarzi 244)." Thus, it is not clear how corruption affects a country's FDI attractiveness.

Before any hypothesis is proposed, one thing should be noted—this research is based on the logic of economic development. There have been debates on the effects of foreign direct investment on domestic economic growth. Recently, many scholars have contended that foreign direct investment actually leads to economic growth.[2] My argument will be based on those previous studies that found foreign direct investment will provide capital that may not be available in host country's domestic market, helping their economic growth. Following those theories, it would be better for countries to attract more foreign direct investment to develop their economies. Even more, for those countries lacking capital resources and technologies, MNEs are "often 'the only hope'" (Biersteker 1978: 2). Consequentially, countries will compete for the limited resources, which is the total amount of FDI available in a specific year.

In this paper, I attempt to empirically discover the relationship between the perceived level of corruption and the FDI attractiveness of countries, since previous theoretical works provide no dominant frameworks to form hypotheses. I will test the effect of corruption on the FDI attractiveness by using a sample of 90 countries from 1984 to 2004.

This paper will be organized as follows: in the next section, I will discuss the different perspectives on the relationship between the corruption and the FDI and briefly survey the previous studies on the relationship between them. Then, in the research design section, I will explain variables and models. Moving to the analysis section, I will analyze four different models. In the first analysis section, I will test the general effect of corruption on the FDI attractiveness for 90 countries. In the consecutive analysis, I will compare the differential effects of corruption on various sub-group samples. Finally, I will conclude with

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[1] Dunning 1992.

[2] Firebaugh 1992; De Soysa and Oneal 1999; Jensen 2003.

policy implications. With the findings from the analysis of the latest data of 90 countries for 21 years, I expect that the effect of corruption on FDI attractiveness will be revealed.

1.1. Differing Perspectives on the Corruption and the FDI

It is only recently that corruption and FDI have been studied jointly (Habib and Zurawicki 2002). In the past, the views on corruption's effect on economic performance have been divergent among scholars. Besides Bayley (1966) and Huntington (1968), Theobald (1990) also argues that corruption can help economic growth. He argues that corruption can actually assist capital formation and allow business interests to penetrate the bureaucracy. However, those studies have not provided the dominant theories with respect to the relationship between corruption and FDI.

Actually, more theories have been developed about the negative effect of corruption on FDI. Many scholars (Drabek and Payne 2001; Wei 1997) have focused on the fact that corruption is not transparent. This non-transparency means additional costs for the MNEs. Wei (1997: 1) argues that "corruption embeds arbitrariness and creates uncertainty." Thus, foreign investors would not be attracted by countries where uncertainty, induced by arbitrariness in corruption, is pervasive.

To study how the perceived level of corruption affects the FDI attractiveness of countries, it is important to see why MNEs invest abroad. John H. Dunning has provided the dominant framework in this regard. According to Dunning (2001: 176), the extent and pattern of international production, financed by FDI and undertaken by MNEs, will be determined by considering the combination of three sets of advantages:

(1) The (net) competitive advantages which firms of one nationality possess over those of another nationality in supplying any particular market or set of markets. These advantages may arise either from the firm's privileged ownership of, or access to, a set of income-generating assets, or from their ability to coordinate these assets with other assets across national boundaries in a way that benefits them relative to their competitors or potential competitors.

(2) The extent to which firms perceive it to be in their best interest to internalize the markets for the generation and/or the use of these assets; and by so doing add value to them.

(3) The extent to which firms choose to locate these value-adding activities outside their national boundaries.

Those advantages are so-called OLI variables: "O" stands for ownership advantages; "L" for location advantages; and "I" for internalization advantages. Since the purpose of this study is to analyze the impact of the perceived level of corruption on the FDI attractiveness of countries, I will assume the existence of ownership and internalization advantages of firms is constant.[3] My attention focuses on the host country's location-specific advantages comprising natural resources, physical and social infrastructure, and intangible resources such as policies of governments that create favorable business environment. Li and Resnick (2003) also point out that policies on tariffs, domestic corporate taxation, investment or tax regulation of foreign firms, profit repatriation or transfer pricing, royalties on extracted natural resources, antitrust regulation, technology transfer requirements, intellectual property protections, and labor market regulation are important factors that MNEs would consider.

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[3] This assumption has been adopted by many case studies on FDI. See Afriyie 1998.

MNEs must utilize the factors in foreign countries to earn profits from their investment. Therefore, the location-specific advantages of different countries are very important in determining which countries will be more attractive to the MNEs.

Li and Resnick (2003) focus on the ways in which democratic institutions in host countries can diminish the MNE's ability to exploit and enhance their positions. With their unique position toward host countries, especially toward developing countries, as a source of capital, technology, and managerial expertise, MNEs want to utilize advantages from their position. It has been true that MNEs have had special negotiating advantages until recently (Tarzi 1991).

However, MNEs' bargaining power against host countries can be affected generally by two factors. First, competition among MNEs for investment opportunities can affect the bargaining position of both MNEs and host countries. According to Tarzi (1991), the bargaining power of host countries was weak in the 1950s and 1960s. The availability of alternative investment opportunities weakened the bargaining power of individual countries. However, the increasing number of MNEs from various regions has provided host countries with the option of choice. This increased option of choice, in turn, would enhance the position of host country in a bargaining table.

Second, more importantly for this study, the attitudes and beliefs of the ruling elites regarding foreign investment can constrain the power of MNEs. MNEs have been seeking the investment opportunities where they can maintain monopolistic or oligopolistic positions. However, democratic institutions are not always favorable to FDI. As Li and Resnick (2003) point out, since many MNEs have decreased or have a potential to decrease the market competition, elected public officials in democratic governments are motivated to limit MNEs' monopoly or oligopoly positions through constraining public policy. In democracies, elected public officials prefer more inward FDI in the belief that it would improve national economic benefits. Thus, they presumably want to upgrade linkages between FDI and the local economy. For example, a host government may require MNEs to use local suppliers. Even more, a host government can change their once favorable policy toward MNEs. In reaction, MNEs may prefer the countries "where individual leaders in host countries were known to accept private payments in exchange for their efforts to preserve the status quo" (Tarzi 1991: 244).

To gain full benefits from their investment, it is very important for MNEs to keep maintaining the original terms that favored them, when the bargaining advantage may shift to the host government. For that purpose, the development of allied local groups is an important instrument for MNEs to maintain their dominant position (Biersteker 1978). The most important reason for those elite groups in host countries to join the MNEs is that their gain outweighs the loss. Of course, private material gain would be considered with the utmost importance.

In theory, it is not only the type of regime, but also the behavior of elite groups in host countries that can affect the decision making of MNEs. In sum, it has been theorized that MNEs prefer the investment environment where they can easily influence the government and elite groups, so they can maintain their dominant position. At the same time, those government officials and elite groups in host countries may exchange preferable policies toward MNEs with their private benefits.

Consequentially, theory cannot provide us with the dominant framework to hypothesize the relationship between the corruption and the FDI attractiveness of host countries. It is now more a matter of empirical testing.

2. PREVIOUS STUDIES

Since Rose-Ackerman (1975), a substantial number of economists have theorized and tried to emprically test the impact of corruption on economic performance. Even though a great number of studies have been produced by scholars in business and economics,[4] an increasing number of studies also have been produced by political scientists recently.[5]

Mauro (1995) provides the first systematic empirical analysis of the effect of corruption on investment using a corruption index. Mauro (1995) uses an index of corruption from Business International (1984), a publication of the Economist Intelligence Unit which supplies subjective assessments of 56 risk factors to private investors for 68 countries. Mauro finds that corruption lowers private investment, reducing economic growth. His results hold even after controlling for other determinants of investment. His findings even suggest that corruption still hurts economic growth in countries where bureaucratic regulations are very cumbersome, which was expected by some scholars otherwise. However, the dataset he uses for the analysis is limited in terms of time span to just one year. Basically, his study is a cross-sectional analysis, so it is difficult to see the dynamics of the effect of corruption on FDI.

Shleifer and Vishny (1993) argue that corruption is much more distortionary and costly than taxation because of its illegality and the need for secrecy. They list post-Communist Russia as an example. To invest in a Russian company, a foreign investor must bribe every agency involved in foreign investment. That factor has kept foreign investors from investing in Russia. However, their argument is entirely based on an economic model, not backed by empirical data.

Wei (1997) confirms the argument of Shleifer and Vishny (1993) by analyzing empirical data. He argues that corruption causes more serious problems than tax in terms of distorting the efficient allocation of resources because corruption is "not transparent, not preannounced, and carries a much poorer enforcement of an agreement between a briber and a bribe" (1). That is, corruption by nature has a characteristic of arbitrariness, so it creates uncertainty. He finds that the effect of uncertainty on foreign direct investment is negative and statistically significant. If the level of corruption-induced uncertainty increases from the level of Singapore to that of Mexico, it would be equivalent to raise the tax rate on multinational firms by 32 percentage points. Wei (2000) extends his previous research by using broader panel data.

Most recently, Drury, Krieckhaus, and Lusztig (2006) argue that corruption's effect on economic growth in democracies is not significant, while, in non-democracies, the effect is negative and significant. They conclude that "this corruption will be restricted to those activities and sectors that have relatively little impact on national economic performance because voters will definitely act to remove politicians that engage in significant growth-impairing corruption" (Drury et al. 2006: 126). One of their contributions is that they use much broader panel data for their studies. They expand the time span of data set to 16 years.

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[4] Bardhan 1997; Cuervo-Cazurra 2006; Edgardo, Lien and Pradhan 2001; Habib and Zurawicki 2002; Kwok and Tadesse 2006; Mauro 1995, 1997; Shleifer and Vishny 1993; Tanzi 2002; Wei 2000.
[5] Drury, Krieckhaus and Lusztig 2006; Jensen 2003; Sandholtz and Koetze 2000; Warren 2004.

3. RESEARCH DESIGN

3.1. Data

Corruption is extremely difficult to measure (Alesina and Weder 2002). In most literature (e.g., Wei 2000; Rose-Ackerman 1975), corruption is defined as the abuse of public power for private gain. In other words, corruption has secrecy, illegality, various ways of seeking benefits. Considering this nature of corruption, it is impossible to obtain objective information to measure the extent of corruption. Thus, most corruption measures are based on the surveys from the experts or firm managers in that country. Since most of these datasets are basically based on surveys of experts and consultants, they inevitably have a problem with subjectivity. Thus, it is important to check the validity and the reliability of the dataset.

As Mauro (1997) points out, when the experts or the consultants made subjective judgments on the level of corruption of a certain country, they should be careful not to be influenced by the economic performance of that country. Thus, Mauro (1997: 83-84) argues that "researchers who use such indices must be extremely cautious in asserting a causal relationship between corruption and any economic variables found correlated with it."

With regard to the reliability of indices, Alesina and Weder (2002) test the correlation among corruption indicators. Even though most indexes are compiled by different institutions using very different experts and survey methodologies, they find that those corruption measures are highly correlated.

One of the frequently used measures of corruption in academic research is the data from the International Country Risk Guide (ICRG) by Political Risk Services, a private international investment risk service. In this dataset, high corruption means that "high government officials are likely to demand special payments" and "illegal payments are generally expected throughout lower levels" in the form of "bribes connected with import and export licenses, exchange controls, tax assessment, police protection, or loans."

The second source is the Business International (BI) Index. The Business International Index is also based on surveys of experts and consultants. It is said that the surveys are typically based on one consultant per one country (Wei 1999). Corruption in this data set is measured according to "the degree to which business transactions involve corruption or questionable payments."

The third source is the Transparency International Corruption Perceptions Index (CPI). Transparency International, an international non-governmental organization, has produced CPI every year since 1995. The TI index is not based on direct survey. Wei (1999) emphasizes that CPI should not be used to measure changes in corruption level over time for a particular country, since the TI indexes in different years are derived from a potentially different set of surveys.

Even though there exists criticism[6] about the ICRG data, ICRG's measurement of perceived level of corruption will be used as a proxy for the corruption measure in this study. The biggest merit of using the ICRG data is that only this data yield annual data since 1982. Compared to other data sets for the corruption measure, this provides data for a much longer period. The data set I built for this study covers 90 countries for 21 years from 1984–2004.

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[6] See Lambsdorff, 2005.

Except for Drury, Krieckhaus, and Lusztig (2006), most quantitative works on the effect of corruption on economy have been cross-country analyses or have used a very short time span. Consequentially, it is difficult to see the effect of corruption. Since the data I used in this study includes a much broader time span and more countries, I assume that I can test the effect of corruption with more confidence.

3.2. Variables

3.2.1. Dependent Variable

FDI Attractiveness   The dependent variable of this study is each country's FDI attractiveness. For this purpose, I use the same formula to calculate the attractiveness as in the United Nations Conference on Trade and Development's Inward FDI Performance Index (UNCTAD Index).

This index is "the ratio of a country's share in global FDI inflows to its share in global GDP" (UNCTAD 2008). The mathematical expression of UNCTAD Index is:

$$IND_i = \frac{FDI_i / FDI_w}{GDP_1 / GDP_w}$$

Where,

IND_i =   The Inward FDI Performance Index of the ith country

FDI_i =   The FDI inflows in the ith country

FDI_w =   World FDI inflows

GDP_i =   GDP in the ith country

GDP_w =   World GDP

The actual UNCTAD Index is a composite for three years. However, in this study FDI attractiveness is calculated annually from 1984 to 2004 for 90 countries.

According to this measurement, if a value of this index is greater than one, it indicates that the country receives more FDI than its relative economic size. On the other hand, if a value of this index is below one, it means that it receives less. Accordingly, a negative value means that foreign investors actually disinvested in that period.

3.2.2. Independent Variables

Corruption   In the ICRG data set, the corruption is coded on a seven-point scale, in which the minimum number, zero, is assigned to the most corrupt countries, while the maximum number, six, is given to the least corrupt countries. According to the data description, "The most common form of corruption met directly by business is financial corruption in the form of demands for special payments and bribe connected with import and export license, exchange controls, tax assessments, police protection, or loans" (The PRS Group 2006: 31). To make the results easier to understand, I recoded the original data, so the least corrupt countries now have zero, whereas the most corrupt countries have six.

As discussed, the effect of corruption is unclear. In many studies, corruption is assumed to distort the economic and financial environment. It reduces the efficiency of government and business because the system is working based on patronage rather than ability in the

presence of prevailing corruption. That will make foreign investors conduct business effectively and regard those countries as less attractive. Thus, they would withhold their investment and even consider withdrawing their investment. Also the prevalence of corruption is hurting the governance in the potential host countries so foreign investors lose confidence in the market of those host countries.

However, at the same time, as in many dependency theories, corruption can actually help attract more FDI in less developed countries. Thus, the effect of corruption can be only observed by empirical analysis.

Democracy Level   This variable is drawn from the Polity IV database. The Polity IV dataset operationalizes institutionalized democracy and autocracy along five dimensions: competitiveness of political participation, regulation of political participation, competitiveness of executive recruitment, openness of executive recruitment, and constraints on the chief executive. The polity score, the composite measure of democratic institutions from Polity IV is calculated by subtracting the level of autocracy from the level of democracy, ranging from -10 (strongly autocratic) to +10 (strongly democratic). I recoded this variable by adding 10 to make further interpretation of the results easier. The impact of democratic institutions is also not decisive, as discussed.

3.2.3. Control Variables

GDP Growth Rate   According to Crenshaw (1991), economic growth is found to induce more foreign direct investment inflows to a country. It is almost obvious that foreign investors who want to maximize their profit from investment find fast-growing economies more attractive. I hypothesize that *GDP Growth Rate* is positively correlated with FDI inflows, so it will increase the FDI attractiveness of the host country. Data are from the World Bank's World Development Indicators 2006.

GDP   The economic size itself is also expected to have impact on attracting foreign direct investment. Since more developed economies usually have more consumers with higher purchasing power, capital endowment, and good infrastructure, those factors are assumed to be attractive to foreign investors. Data are from the World Bank's World Development Indicators 2006.

GDP per Capita   To take the effect of the population size and the quality of economies into account, GDP per Capita is used as a control variable. GDP *per capita* data is also from the World Bank's World Development Indicators 2006. As GDP, GDP per capita is also assumed to have a positive effect on the FDI attractiveness of the host countries.

Trade-to-GDP   The most frequently used indicator of the importance of international transactions relative to domestic transactions is the trade-to-GDP ratio, which is the average share of exports and imports of goods and services in GDP. The trade-to-GDP ratio is often called the trade openness ratio. However, according to Naughton and Lardy (1996), the term "openness" to international competition may be somewhat misleading because a low trade–to-GDP ratio does not necessarily mean that those countries have high obstacles (tariff or non-tariff) to foreign trade. Thus, the term "the trade-to-GDP ratio" will be used instead. Data are from the World Bank's World Development Indicators 2006.

4. ANALYSIS

90 countries,[7] which provide all necessary data for 21 years, were selected for this study. Since the dataset is in the form of a time-series cross-section, it has tendency to have both heteroskedasticity and autocorrelation problems. Thus, I use a panel-corrected standard errors method to correct for these problems that might distort the results. When the autocorrelation is detected by Wooldridge test, the prais-winston AR(1) model is used instead.

To see the general effect of corruption on the FDI attractiveness, 90 countries are all included in the first model. Then I analyzed the sub-data groups. In the second analysis, the data is divided into two groups; one group includes 25 OECD countries and the other group includes 65 non-OECD countries. This analysis is expected to provide an answer for the question developed by the dependency theorists. In the third analysis, I divide the data into two sub-groups; one includes 63 countries of which the average democracy level for 21 years from 1984 to 2004 is above zero, while the other group includes 27 countries of which the average democracy level is below zero. In the fourth analysis, the sub-groups were divided according to their standard deviation of democracy level. The countries with relatively bigger standard deviation mostly have experienced the transitional period. With this analysis, we can see how corruption affects the FDI attractiveness of those countries which are in dire need for the FDI for their economic development.

4.1. Analysis of 90 Countries

The first analysis of 90 countries confirms the view that corruption hurts the FDI attractiveness of host countries. As shown in Table 1, we can see that a one point increase in the perceived level of corruption will decrease the FDI attractiveness, the annual calculation of UNCTAD inward FDI Performance Index, by about 0.19 point on average, *ceteris paribus*. Also the more democratic countries and the faster growing economies are positively related to the higher score in FDI attractiveness as expected by most liberal economists.

Thus, we can reject the arguments that MNEs have wanted to invest in more corrupt and less democratic states because they wanted to exploit more rent benefits from their investment.

4.2. Comparison: OECD Countries vs. Non-OECD Countries

As shown in Graph 1, we can see the distinctive difference between OECD member countries and non-OECD member countries in terms of their average level of corruption. For those 25 countries[8] which are included in this study, the average of corruption level is 1.25484 with the standard deviation of 0.602. On the other hand, the average corruption level of those non-OECD member countries is 3.27021 with the standard deviation of 0.654.

This separation of sample groups is employed to see the differential effects of corruption on the countries with different characteristics.

The most notable difference between OECD member countries and non-OECD member

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[7] See Appendix for the list of countries included in this study.

[8] See Appendix for the list of countries.

Table 1. Analysis of 90 Countries: The Effects of Corruption on FDI Attractiveness, 1984-2004

	Coefficient (standard errors)
Corruption	**-0.1897535**** (0.0566235)
Democracy level	**0.0657275**** (0.0107925)
GDP	1.19e-13 (6.80e-14)
GDP growth rate	**0.0853107**** (0.020148)
GDP per capita	**-0.0000358**** (0.0000127)
Trade-to-GDP	**0.0367669**** (0.0063232)
Constant	0.0647442 (0.6152015)
Number of observations	1855
R^2	0.1596

Note: ** significant at the 95 percent level.

Graph 1. Comparison between OECE and Non-OECD Countries: Average and Standard Deviation of Corruption Level
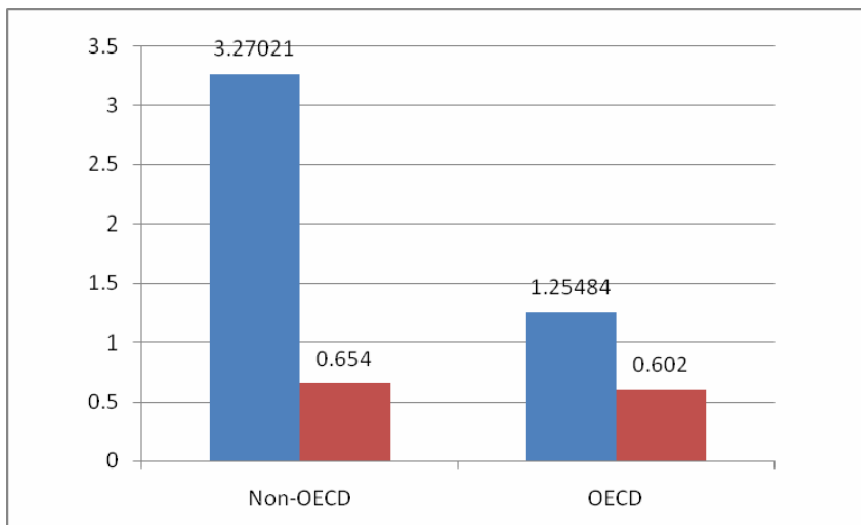
Table 2. Comparison: OECD Countries vs. Non-OECD Countries

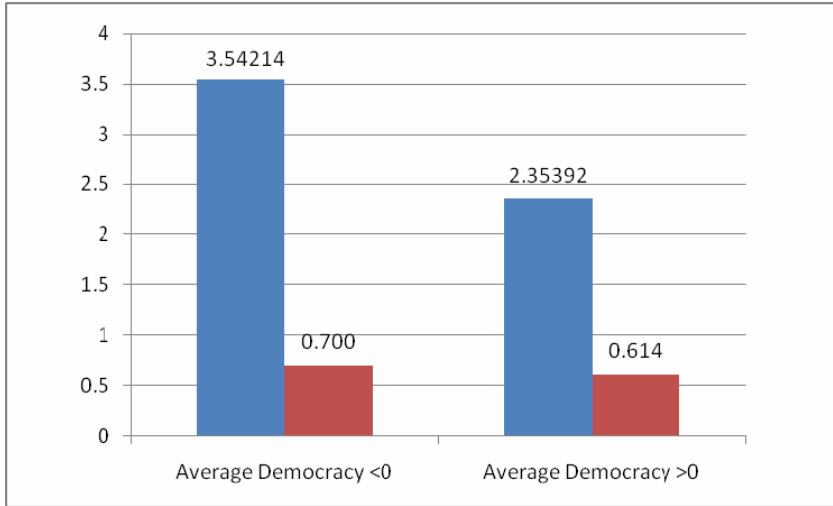|	Coefficients (Standard error)	
	OECD countries	Non-OECD countries
Corruption	-0.1623554	**-0.1493523****
	(0.1863122)	(0.0703864)
Democracy level	0.1056059	**0.0633041****
	(0.0876573)	(0.0117775)
GDP	1.82e-13	1.18e-12
	(1.84e-13)	(6.26e-13)
GDP growth rate	-0.0102843	**0.0997339****
	(0.0358436)	(0.0210754)
GDP per capita	**-0.0000681****	**-0.0001369****
	(0.000034)	(0.000024)
Trade-to-GDP	**0.0444163****	**0.0357922****
	(0.0079612)	(0.0076028)
Constant	-0.3769678	-0.1286392
	(2.107937)	(0.0076028)
Number of observations	517	1338
R^2	0.0754	0.1471

Note: ** significant at the 95 percent level.

countries is the effect of the corruption on FDI attractiveness. For non-OECD member countries, corruption level is negatively related to their FDI attractiveness. That negative is statistically significant at a 95 percent level. Also even within non-OECD member countries, more democratic countries are more attractive for foreign investors than less democratic countries.

However, both corruption level and democracy level do not have any statistically significant effect on FDI attractiveness for the OECD member countries. This result can be explained by the fact that the corruption level and the democracy level of the OECD member countries have been pretty stable for a longer time period. That is, corruption levels and democracy levels have not varied much. Since these independent variables have not varied, they cannot explain the variation of the dependent variable.

From this analysis, we can also reject the argument that less developed countries can attract more foreign investment by having enough corruption which can work as grease. Even within those non-OECD member countries, corruption would hurt the FDI attractiveness of host countries.

Graph 2. Comparison between Countries with Average Democracy Level < 0 and Countries with Average Democracy Level > 0: Average and Standard Deviation of Corruption Level

Table 3. Comparison: Countries with Average Democracy Level > 0 vs. Countries with Average Democracy Level < 0

	Coefficients (Standard error)	
	Countries with the average democracy level > 0	Countries with the average democracy level < 0
Corruption	**-0.1573741***	**-0.1582279***
	(0.0809837)	(0.0898981)
Democracy level	**0.1235413****	**-0.0427886****
	(0.0202603)	(0.0184735)
GDP	9.58e-14	**1.56e-12****
	(7.51e-14)	(5.21e-13)
GDP growth rate	**0.1010922****	**0.054265****
	(0.0337389)	(0.0243064)
GDP per capita	**-0.0000393****	**-0.0003779****
	(0.0000147)	(0.0000735)
Trade-to-GDP	**0.0372186****	**0.0399378****
	(0.0070278)	(0.0050249)
Constant	**-1.186361***	0.6881823
	(0.6976446)	(0.7736761)
Number of observations	1303	552
R^2	0.1916	0.0943

Note: ** significant at the 95 percent level, *significant at the 90 percent level.

4.3. Comparison: Countries with Average Democracy Level > 0 vs. Countries with Average Democracy Level < 0

In the third analysis, the sub-groups are divided according to their average democracy level. Since the range of the Polity IV data is -10 to 10, I arbitrarily make a cut point at 0. Following this cut point at 0, the average democracy level is below 0 for 27 countries.[9] As shown in Graph 2, these two groups also have different characteristics with respect to the corruption level. For those countries of which the average democracy level is below 0 for 21 years from 1984 to 2004, the average corruption level is 3.54214 with the standard deviation of 0.700. On the other hand, the average corruption level is 2.35392 with the standard deviation of 0.614 for those countries of which the average democracy level is above 0 for the time period of this study.

As shown in Table 3, higher corruption is related to lower FDI attractiveness for both groups. However, it is statistically significant at 90 percent level this time. Corruption has almost same effect in both groups. The coefficients of corruption on FDI attractiveness are -0.1573741 and -0.1582279 for the countries with the average democracy level above 0 and for the countries with the average democracy level below 0, respectively.

The notable difference between two sub-groups in this analysis is the effect of democracy level on FDI attractiveness. For those countries with the average democracy level above 0, the higher level of democracy is related to higher FDI attractiveness. This result is statistically significant at 95 percent level. On the other hand, the democracy level is negatively related to the FDI attractiveness for those countries with the average democracy level below 0. One point increase in democracy level will lead to 0.0427886 point decrease in FDI attractiveness index. This result can mean that MNEs will prefer more autocratic government after the corruption level is controlled. This result is confirming the argument of dependency theorists that MNEs will choose less democratic countries to exploit more benefits from their investment.

4.4. Comparison: Comparison: Countries with Standard Deviation of Democracy Level < 3 vs. Countries with Standard Deviation of Democracy Level > 3

In this analysis, sub-groups are divided according to the standard deviation of democracy level. The arbitrary cut point in this analysis is the standard deviation of 3.00. I separate these two sub-groups to see the differential effects of corruption on FDI attractiveness between more stable and less stable regimes. The countries[10] with a standard deviation of democracy level larger than 3 can be considered less stable regimes that have experienced the transitional period.

These two sub-groups also have different characteristics with respect to the corruption level. As shown in Graph 3, less stable countries, of which the standard deviation of democracy level is bigger than 3, have a higher level of corruption than more stable countries on average. This result is similar to the World Bank (2000) in that countries in transitional periods experience high corruption.
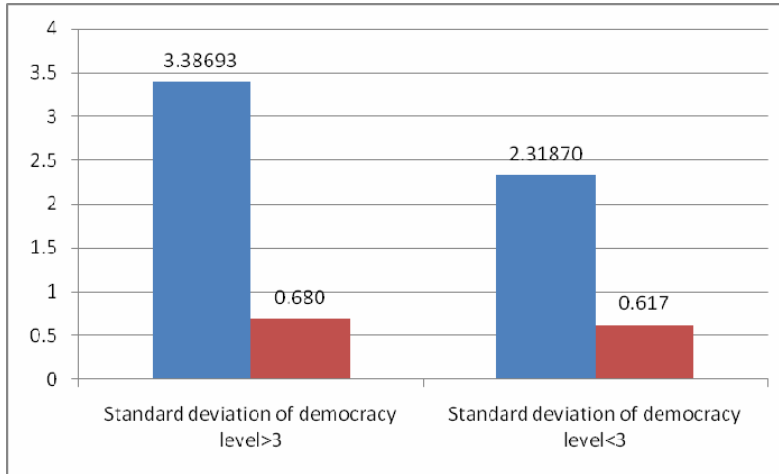
As shown in Table 4, corruption has more damaging effects on the economy in the less

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[9] See Appendix for the list of countries.

[10] See Appendix for the list of countries.

Graph 3. Comparison between Countries with Standard Deviation of Democracy Level > 3 and Countries with Standard Deviation of Democracy Level < 3: Average and Standard Deviation of Corruption Level

Table 4. Comparison: Countries with Standard Deviation of Democracy Level < 3 vs. Countries with Standard Deviation of Democracy Level > 3

	Coefficients (Standard error)	
	Countries with the standard deviation of democracy level<3	Countries with the standard deviation of democracy level>3
Corruption	-0.1065892	**-0.2920831****
	(0.0918313)	(0.0718327)
Democracy level	**0.0833738****	**0.0513684****
	(0.0154074)	(0.0185315)
GDP	**1.77e-13****	**7.41e-13****
	(9.95e-14)	(9.27e-13)
GDP growth rate	**0.0672153****	**0.0997094****
	(0.0332983)	(0.032803)
GDP per capita	**-0.0000486****	-0.0000562
	(0.0000178)	(0.0000783)
Trade-to-GDP	**0.0427012****	**0.0227542****
	(0.008457)	(0.0052886)
Constant	-0.8322506	**1.536892****
	(0.8609737)	(0.7062937)
Number of observations	1172	683
R^2	0.1792	0.1107

Note: ** significant at the 95 percent level.

stable countries, where as it has statistically insignificant effect in the more stable countries. For those countries with the standard deviation of democracy level bigger than 3, the coefficient of corruption level on FDI attractiveness is -0.2920831 and this is statistically significant at the 95 percent level. Compared with the magnitude of impact of corruption in other sub-groups in this study, the impact of corruption is much stronger in less stable countries. It is almost two times larger than the coefficients of other sub-groups. Thus, we can conclude that corruption is more harmful for those countries which have experienced or are experiencing the transitional period.

With regard to the democracy level, a higher democracy level is related to higher FDI attractiveness for both less stable and more stable countries. This result is statistically significant at the 95 percent level.

In sum, the results of this study show that corruption has a negative effect on the FDI attractiveness of host countries. Corruption especially causes more detrimental problems for those countries that have experienced the transitional period.

5. CONCLUSION

It has long been argued whether the corruption is an obstacle or a benefit. Policy makers as well as scholars have provided contradictory theoretical arguments about the effect of corruption on economies. Questions around contending perspectives on this relationship between the level of corruption and FDI can only be solved by an empirical test. This study is intended to solve that question.

Empirical results from this study suggest that corruption generally has harmful effect on attracting FDI. When I investigated the differential effect of corruption on various sub-group samples, corruption had a stronger negative effect on those countries in which the democracy level has fluctuated more turbulently. Also those countries with more experience in autocracy are more heavily affected by corruption. In most cases, those countries are indeed in dire need of FDI for their economic growth. Thus, these results confirm the arguments by mainstream liberal economists that corruption is harmful in attracting FDI.

However, one notable finding from this study is that more autocratic countries will attract more FDI compared to their GDP share after controlling for the effect of corruption. This result implies that the behavior of MNEs depends on the regime type. If MNEs consider FDI opportunities among less democratic countries, they would prefer more autocratic countries.

Since many less democratic countries in the Middle East and Africa have attracted FDI because of their natural resources endowment, it will provide us with a better understanding if we can incorporate those variables in future study.

In conclusion, this study has attempted to see whether corruption has harmful effect on FDI attractiveness by using panel data with 90 countries for 21 years. This study also finds that corruption actually causes more problems for those countries which need FDI for their economic development. Thus, corruption should be controlled not only for political purposes but also for the economic prosperity of those countries.

Appendix

List of 90 countries in this study

Albania	Ecuador	Jamaica	Philippines
Algeria	Egypt	Japan	Portugal
Angola	El Salvador	Jordan	Senegal
Argentina	Ethiopia	Kenya	Sierra Leone
Australia	Finland	Madagascar	South Africa
Austria	France	Malawi	South Korea
Bangladesh	Gabon	Malaysia	Spain
Belgium	Gambia	Mali	Sri Lanka
Bolivia	Ghana	Mexico	Sweden
Botswana	Greece	Morocco	Switzerland
Brazil	Guatemala	Mozambique	Syria
Bulgaria	Guinea	Netherlands	Thailand
Cameroon	Guyana	New Zealand	Togo
Canada	Haiti	Nicaragua	Trinidad & Tobago
Chile	Honduras	Niger	Turkey
China	Hungary	Nigeria	United Kingdom
Columbia	Iceland	Norway	United States
Congo	India	Oman	Uruguay
Congo, DR	Indonesia	Pakistan	Venezuela
Costa Rica	Iran	Panama	Zambia
Cyprus	Ireland	Papua New Guinea	Zimbabwe
Denmark	Israel	Paraguay	
Dominican Rep	Italy	Peru	

List of 25 OECD countries in this study

Australia	Greece	Netherlands	Switzerland
Austria	Hungary	New Zealand	Turkey
Belgium	Iceland	Norway	United Kingdom
Canada	Ireland	Portugal	United States
Denmark	Italy	South Korea	
Finland	Japan	Spain	
France	Mexico	Sweden	

List of 63 countries with the average democracy level > 0

Albania	Dominican Rep	Jamaica	Portugal
Argentina	Ecuador	Japan	Senegal
Australia	El Salvador	Madagascar	South Africa
Austria	Finland	Malaysia	South Korea
Bangladesh	France	Mali	Spain
Belgium	Gambia	Mexico	Sri Lanka
Bolivia	Greece	Netherlands	Sweden
Botswana	Guatemala	New Zealand	Switzerland
Brazil	Guyana	Nicaragua	Thailand
Bulgaria	Honduras	Norway	Trinidad & Tobago
Canada	Hungary	Pakistan	Turkey
Chile	Iceland	Panama	United Kingdom
Columbia	India	Papua New Guinea	United States
Costa Rica	Ireland	Paraguay	Uruguay
Cyprus	Israel	Peru	Venezuela
Denmark	Italy	Philippines	

List of 27 countries with the average democracy level < 0

Algeria	Ethiopia	Jordan	Oman
Angola	Gabon	Kenya	Sierra Leone
Cameroon	Ghana	Malawi	Syria
China	Guinea	Morocco	Togo
Congo	Haiti	Mozambique	Zambia
Congo, DR	Indonesia	Niger	Zimbabwe
Egypt	Iran	Nigeria	

List of 33 countries with the standard deviaiton of democracy level > 3

Albania	Guatemala	Mexico	Senegal
Algeria	Haiti	Mozambique	Sierra Leone
Bangladesh	Hungary	Nicaragua	South Korea
Bulgaria	Indonesia	Niger	Thailand
Chile	Iran	Nigeria	Uruguay
Congo	Kenya	Pakistan	Zambia
Congo, DR	Madagascar	Panama	
Gambia	Malawi	Paraguay	
Ghana	Mali	Philippines	

List of 57 countries with the standard deviation of democracy level < 3

Angola	Dominican Rep	Israel	Spain
Argentina	Ecuador	Italy	Sri Lanka
Australia	Egypt	Jamaica	Sweden
Austria	El Salvador	Japan	Switzerland
Belgium	Ethiopia	Jordan	Syria
Bolivia	Finland	Malaysia	Togo
Botswana	France	Morocco	Trinidad & Tobago
Brazil	Gabon	Netherlands	Turkey
Cameroon	Greece	New Zealand	United Kingdom
Canada	Guinea	Norway	United States
China	Guyana	Oman	Venezuela
Columbia	Honduras	Papua New Guinea	Zimbabwe
Costa Rica	Iceland	Peru	
Cyprus	India	Portugal	
Denmark	Ireland	South Africa	

REFERENCES

Afriyie, Kofi, 1998, Foreign Direct Investment in Ghana's Emerging Market Economy, In *Globalization, Trade, and Foreign Direct Investment*, by John H. Dunning, 217-236. Oxford: Elsevier.

Alessina, Alberto and Beatrice, Weder, 2002, "Do Corrupt Governments Receive Less Foreign Aid?" *The American Economic Review* 92: 1126-1137.

Bardhan, Pranab, 1997, "Corruption and Development: A Review of Issues," *Journal of Economic Literature* 35: 1320-1346.

Bayley, David H, 1966, "The Effects of Corruption in a Developing Nation," *The Western Political Quarterly,* 19: 719-732.

Biersteker, Thomas J., 1978, *Distortion or Development?: Contending Perspectives on the Multinational Corporation.* Cambridge, MA: The MIT Press.

Cantwell, John, and Rajneesh Narula, 2001, "The Eclectic Paradigm in the Global Economy," *International Journal of the Economic of Business* 8: 155-172.

Crenshaw, Edward, 1982, "Foreign Investment as a Dependent Variable: Determinants of Foreign Investment and Capital Penetration in Developing Nations, 1967-1978," *Societal Forces* 69: 1169-1182.

Cuervo-Cazurra, Alvaro, 2006, "Who Cares about Corruption?" *Journal of International Business Studies,* 37: 807-822.

De Soysa, Indra, and John R. Oneal, 1999, "Boon or Bane? Reassessing the Productivity of Foreign Direct Investment," *American Sociological Review* 64: 766-782.

Dixon, William J., and Terry Boswell, 1996, "Dependency, Disarticulation, and Denominator Effects: Another Look at Foreign Capital Penetration," *The American Journal of Sociology* 102: 543-562.

Drabek, Zdenek, and Warren Payne, 2001, *The Impact of Transparency on Foreign Direct Investment.* Staff Working Paper, Geneva: World Trade Organization.

Drury, A. Cooper, Jonathan Krieckhaus and Michael Lusztig, 2006, "Corruption, Democracy, and Economic Growth," *International Political Science Review* 27: 121-136.

Dunning, John H., 1992, *Multinational Enterprises and the Global Economy,* Reading: Addison-Wesley.

Dunning, John H., 1995, "Reappraising the Eclectic Paradigm in an Age of Alliance Capitalism," *Journal of International Business Studies* 26: 461-491.

Dunning, John H., 2001, "The Eclectic (OLI) Paradigm of International Production: Past, Present and Future," *International Journal of Economics of Business* 8: 173-190.

Dunning, John H. and Rajneesh Narula, 1996, "The Investment Development Path Revisted: Some Emerging Issues," In *Foreign Direct Investment and Governments*, by John H. Dunning and Rajneesh Narula, 1-41. London: Routledge.

Edgardo, Campos J., Donald Lien and Sanjay Pradhan, 2001, "Corruption and Its Implication for Investment," In *Corruption: The Boom and Bust of East Asis*, by Campos J. Edgardo, 1-29. Quezon City: ADMU Press.

Firebaugh, Glenn, 1992, "Growth Effects of Foreign and Domestic Investment," *The American Journal of Sociology,* 98: 105-130.

Gilpin, Robert, 1972, "The Political Economy of the Multinational Corporation: Three Contrasting Perspectives," *The American Political Science Review* 70: 184-191.

Habib, Mohsin and Leon Zurawicki, 2002, "Corruption and Foreign Direct Investment," *Journal of International Business Studies* 33: 291-307.

Huntington, Samuel P., 1968, *Political Order in Changing Societies.* New Haven: Yale University Press.

Jensen, Nathan M., 2003, "Democratic Governance and Multinational Corporations: Political Regimes and Inflows of Foreign Direct Investment," *International Organization* 57: 587-616.

Kwok, Chucky CY and Solomon Tadesse, 2006, "The MNC as an Agent of Change for Host-country Institutions: FDI and Corruption," *Journal of International Business Studies* 37: 767-785.

Lambsdorff, Johann Graf, 2005, "Measuring Corruption: The Validity and Precision of Subjective Indicators (CPI)," In *Measuring Corruption*, by Charles Sampford et al., 81-100. Burlington, VT: Ashgate.

Lengseth, Petter, 2005, "Measuring Corruption," In *Measuring Corruption*, by Charles Sampford et al., 7-44. Burlington, VT: Ashgate.

Li, Quan and Adam Resnick, 2003, "Reversal of Fortunes: Democratic Institutions and Foreign Direct Investment Flows to Developing Countries," *International Organizations* 57: 175-211.

Mauro, Paolo, 1995, "Corruption and Growth," *The 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 *Corruption and The Global Economy*, by Kimberly Ann Elliot, 83-107. Washington, D.C.: Institute for International Economics.

Naughton, Barry and Nicholas R. Lardy, 1996, "China's Emergence and Prospects as a Trading Nation," *Brookings Papers on Economic Activity* 2: 273-344.

Oneal, John R., 1994, "The Affinity of Foreign Investors for Authoritarian Regimes," *Political Reserach Quarterly* 47: 565-588.

Rose-Ackerman, Susan, 1975, "The Economic of Corruption," *Journal of Public Economics* 4: 187-203.

Rose-Ackerman, Susan, 1999, *Corruption and Government: Causes, Consequences, and Reform,* New York: Cambridge University Press.

Sandholtz, Wayne and William Koetze, 2000, "Accounting for Corruption: Economic Structure, Democracy, and Trade," *International Studies Quarterly* 44: 31-50.

Seligson, Mitchell A., 2002, "The Impact of Corruption on Regime Legitimacy: A Comparative Study of Four Latin American Countries," *The Journal of Politics* 64: 408-433.

Shen, Ce and John B. Williamson, 2005, "Corruption, Democracy, Economic Freedom, and State Strength: A Cross-national Analysis," *International Journal of Comparative Sociology* 46: 327-345.

Shleifer, Andrei and Robert W. Vishny, 1993, "Corruption," *The Quarterly Journal of Economics* 108: 599-617.

Tanzi, Vito, 2002, "Corruption Around the World: Causes, Consequences, Scope, and Cure," In *Governance, Corruption, and Economic Performance*, by George T. Abed and Sanjeev Gupta, 19-58. Washington, D.C.: International Monetary Fund.

Tarzi, Shah M., 1991, "Third World Governments and Multinational Corporations: Dynamics of Host's Bargaining Power," *International Relations* 10: 237-249.

The PRS Group, 2006, *A Business Guide to Political Risk for International Decisions,* Data Description, Syracuse, New York: The PRS Group.

The World Bank, 2000, *Anticorruption in Transition: A Contriution to the Policy Debate,* Washington, D.C.: The World Bank.

Theobald, Robin, 1990, *Corruption, Development, and Underdevelopment,* Durham: Duke University Press.

UNCTAD, 2002, *The Inward FDI Performance Index-Methodology,* www.unctad.org/Templates/WebFlyer.asp?intItemID=2469&lang=1 (Accessed March 10, 2008).

USAID, 2005, *USAID Anticorruption Strategy,* Washington, D.C.: United States Agency for International Development.

Warren, Mark E., 2004, "What Does Corruption Mean in a Democracy?" *American Journal of Political Science* 48: 328-343.

Wei, Shang-Jin, 1997, *Why is Corruption So Much More Taxing than Tax?: Arbitrariness Kills.* NBER Working Paper Series, Washington, D.C.: National Bureau of Economic Research.

Wei, Shang-Jin, 1999, *Corruption in Economic Development: Beneficial Grease, Minor Corruption in Economic Development: Beneficial Grease, Annoyance, or Major Obstacle?* Policy Research Working Paper, Washington, D.C.: The World Bank.

Wei, Shang-Jin, 2000, "How Taxing Is Corruption on International Investors?" *The Review of Economics and Statistics* 82: 1-11.

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