THE EFFECT OF CORRUPTION ON FOREIGN DIRECT INVESTMENT
THE CASE OF TURKEY

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ABSTRACT

Corruption is an exchange by a public servant of influence over the provision of a scarce resource for monetary or other reward. Corruption is conventionally perceived as a major obstacle to foreign direct investment in developing countries and, for that reason, governments in those countries have been under pressure from the World Bank and other international organizations to combat the problem.

Corruption is one of the most serious economic problems in developing countries. It is argued that not only does corruption reduce foreign direct investment inflows to a country, but also different forms of corruption have separately identifiable effects on the variable in question.

In this study we tried to examine the effects of corruption on foreign direct investment in Turkey. Granger causality test has been carried out to determine the direction of the relation between the variables based on 1980–2006 yearly data. The results support the negative effects of corruption on foreign direct investment.

Keywords: *Corruption, Foreign Direct Investment, Turkish Economy*

1. Introduction

Corruption is seen in nearly every society since ancient times. However, economic and social costs it caused attracted more attention especially in the last decade. It is widely agreed upon that, corruption affects economic growth and development negatively. Corruption has a deleterious effect on the economics of a country through two main channels – productivity and reductions in investment. Output is diminished through lower productive effort of existing resources. Reductions in investment occur in both physical and human capital as well as degradation of institutions resulting in negative economic consequences (Brown and Shackman 2007: 325). In the literature, there is almost a consensus about that corruption of the public officers discourages entrepreneurs, causes inefficiencies and waste of resources, discourages foreign investment, distorts income distribution and harms democracy and ethics (Bayar, 2007:22).

The definition is too narrow because there are many more phenomena that deserve the label corruption than those that involve the abuse of public office for private gain. Since the 1980s, for example, major corruption scandals in Western Europe have more often involved illicit party funding than individual gain (Reed, 2007:3).

The definition is also too broad to use in an analysis of the causes of corruption. People are tempted to be corrupt when there is some advantage to be gained by doing so. Some people may be more inclined to give into temptation than others but even very bad people are unlikely to do bad things unless they have something to gain by doing so. There is no general incentive to do something bad and thus one cannot design incentives to do something good. Different types of bad behavior thus have different determinants (Nyblade and Reed 2006:311).

As is increasingly recognized in academic literature and by international organisations, corruption acts as a major deterrent to growth and development (Jain, 2001:71). Foreign direct investment is an essential aspect of 'globalization'. In the globalisation process, countries have depend upon each other so much gradually that, both international good flows and capital flows get bigger. Both developing and developed countries try to integrate with the world markets by picking up the limits.

FDIs are some form of conveyance of eligible resources by legal persons and establishments to another country. In this sense FDIs different from portfolio investments is the transfer of nonmaterial assets like brand, technology, business knowhow and includes the placement of these investments attribution by their investors (Blomstrom and Kokko,1998:5). Development of countries depend on FDIs. The fact that is implied by economic development is development and growth. Countries trying to develop and grow like Turkey must increase their FDIs in order to change their economic structure (Ay, 2005:2). There is an abundant literature on the effects of corruption on openness, particularly on how higher corruption leads to lower levels of foreign direct investment. (Larraín and Tavares, 2004: 221).

2. Methodology

A number of trail blazing research articles have been published on the topic of corruption and related foreign direct investment factory (Brown and Shackman, 2007:320). It is the subject of discussion whether the variables within the VAR system should be stationary. The main discussion against the difference extraction is that it causes information losses related to the co-movement in the data. The common opinion on this subject is that the variables in the system are obtained from a real data derivation procedure (Enders, 1995: 310–311).

Recent empirical studies have attempted to test whether the use of first differences or levels of data set in model forecast is more suitable or not. Statistical techniques are for determining whether the data are generally

stationary or not, that is to say, whether average and variances of the data change or not in time. Determination of this qualification of the data is considerably important. the analysis of the forecasts made through non-stationary series is to be evaluated differently from those of the forecasts made by using stationary series.

In this study effects of direct FDIs on corruption is investigated. Granger causality test has been carried out to determine the direction of the relation between the variables. In the study the data of direct FDIs and corruption are used for the period of 1980–2006. Each of the variables is purified from seasonal variations. Model is composed of two variables, namely foreign direct investments (FDI), unrecorded income / GNP (URI) as Proxy variable for corruption. Data set is composed of logarithmic data which have been subjected to annual and seasonal correction for the period of "1980–2006". The most suitable delay length for the system has been chosen as four months. Degree of lag length has been determined according to Awake Information criterion Besides that, the time series features of the series to be in the system have been examined "separately" and "together" via Augmented Dickey Fuller (ADF) and Johansen – Juselius techniques.

3. Results of Analysis

In this section, tests carried out for the solution of the model and their results are explained. Eviews 3.1 econometric packet program has been made use of for carrying out the tests.

3-1- Unit Root Test

Stationarity analysis of the series in this research has been carried out by the use of ADF unit root test. Results of ADF unit root test are given in Table 1. As seen from the Table 1, results are presented related to the stationarity of the variables which have been used in research through ADF test. According to these results, absolute values of ADF statistics belonging to the original values of variables is not stationary as they are lower than the absolute values of McKinnon critical values at different significance levels. The first differences of this have been taken. According to these results, absolute values of ADF statistics belonging to the original values of variables is stationary as they are higher than the absolute values of McKinnon critical values at different significance levels.

Table 1: Augmented Dickey Fuller Unit Root Analysis Results (ADF)

Variable		Constant	Constant / Trendy
LFDI		1.457482	-0.28864
LURI		-0.9973	-2.0606
McKinnon Critical Values	a=%1	-3.7204	-4.3738
	b=%5	-2.9850	-3.6027
	c=%10	-2.6318	-3.2367
ΔLFDI		-7.109 [a]	4.950[a]
ΔLURI		3.786[a]	-4.616[a]
McKinnon Critical Values	a=%1	-3.7343	-4.3942
	b=%5	-3.9907	-3.6168
	c=%10	-2.6348	-3.2418

[a] stationarity at 1% according to the McKinnon critical values

3-2- Co-integration Test

Multivariate co-integration technique developed by Johansen (1988, 1991) and Johansen and Juselius (1990, 1992), which enables the forecasts to be made by maximum feasibility method, has been used. This method is much more convenient compared to other methods as it enables the testing of different hypotheses and as it is practical even when there are some variables I(0) (Hansen and Juselius, 1995).

Table 2. Johansen co-integration test results

	Likelihood	%5 Percent	%1 Percent	Hypothesized
Eigenvalue	Ratio	Critical Value	Critical Value	No. of CE(s)
0.472051	15.48979	15.41	20.04	None
0.006630	4.159641	3.76	6.65	At most 1

Note: L.R. test indicates 1 cointegrating equation(s) at 5% significance level

It is first necessary in co integration test to determine how many delayed values of the variables in the used VAR model will take part. In the research, lag length of VAR model has been determined as 1 via Akaike information criterion (AIC).

Results of Johansen co-integration test are given in Table 2. Comparison of maximum eigenvalue and trace statistics calculated with the critical values taken from Osterwald-Lenum (1992) study shows the existence of co-integrated vector at the level of 5% and 1%. The existence of the co-integration between variables means a causality relation at least in one direction, as stated by Granger (1988) as well. In addition to co-integration analysis, a causality analysis has also been carried out to determine the dynamic relations between two variables.

3-3- Causality Test

Granger causality test has been carried out to determine the direction of the relation between the variables. Granger's causality test is carried out with the help of equations below:

$$Y_t = \alpha_0 + \sum_{i=1}^{k_1} \alpha_i . Y_{t-i} + \sum_{t=1}^{k_2} \beta_i . X_{t-i} + \varepsilon_t$$

(1)

$$X_t = \chi_0 + \sum_{i=1}^{k_3} \chi_i . X_{t-i} + \sum_{i=1}^{k_4} \delta_i . Y_{t-i} + vt_t$$

(2)

Table 3. Granger Causality Test Result

Granger Causality Tests			
Sample: 1980-2006			
Lags: 2			
Null Hypothesis:	Obs	F-Statistic	Probability
URI does Granger Cause FDI	25	3.69962	0.04295
FDI does not Granger Cause URI		0.07228	0.93051

*F α (m, n-k) =0, 05 (2, 26) =3, 39

In the equation (2), if β indis coefficients are found to be different from zero at a certain level, the fact that X is the cause of Y is arrived at a conclusion. Similarly, in the equation (3), the fact that coefficients is different from zero at a certain level is the indicator of that Y is the cause of X (Granger, 1974: 431).

The F value calculated and the F value in the Tablo 3 is compared and a conclusion is made. Because the calculated F value is

higher than the critical F value, the hypothesis that there is causality from URI to FDI is accepted. On the other hand, because the calculated F value is lower than the critical F value, the hypothesis that there is causality from FDI to URI is not accepted. According to Granger causality analysis, corruption (URI) in Turkey does affect foreign direct investments (FDI). On the other hand foreign direct investments (FDI) in Turkey does not affect corruption (URI).

4. Conclusıons

In this study we tried to examine the effects of corruption on foreign direct investment in Turkey. It is widely agreed upon that, corruption affects economic growth and development negatively. In the literature, there is almost a consensus about that corruption of the public officers discourages entrepreneurs, causes inefficiencies and waste of resources, discourages foreign investment, distorts income distribution and harms democracy and ethics.

Granger causality test has been carried out to determine the direction of the relation between the variables. In the study the data of direct FDIs and corruption are used for the period of 1980–2006. Because the calculated F value is higher than the critical F value, the hypothesis that there is causality from URI to FDI is accepted. On the other hand, because the calculated F value is lower than the critical F value, the hypothesis that there is causality from FDI to URI is not accepted. According to Granger causality analysis, corruption (URI) in

Turkey does affect foreign direct investments (FDI). On the other hand foreign direct investments (FDI) in Turkey does not affect corruption (URI). Putting the diagnosis truly and knowing the deep causes of a problem correctly are the most important steps in solving the problem (Bayar, 2007:22).

Corruption was decomposed into sub-components: bureaucratic reforms, government stability, law and order and civil liberty. While the first sub-components are irrelevant, a country's law and order tradition is a crucial sub-component for attracting capital inflows. This provides direction for reform, suggesting that attempts to become attractive to capital inflows must focus on a strong court system and provisions for an orderly succession of power (Lambsdorff, 2003:240). The practice of tying foreign aid to bureaucratic reforms will likely be an effective strategy to combat corruption around the world. Legal system reform also appears to be an important factor in fighting corruption (Brown and Shackman, 2007:341–342).

Government stability is an assessment of the government's aptitude to carry out its declared programs and its ability to stay in office. These goals are assumed to be achieved with a high level of government unity, strong legislative power and popular support for the government. Corruption can go along with a variety of governance failures, such as an inefficient bureaucracy, excess government intervention and regulation, lacking political stability or the absence of law and order. Law and order

indicates that a country has sound and accepted political institutions, a strong court system and provisions for an orderly succession of power. This can be seriously violated in case of corruption(Lambsdorff, 2003:231–234).

Treisman (2000) argues that democratic systems should lead to lower corruption since the likelihood of exposure or punishment for corrupt acts is increased in an open society and supports this position by concluding that countries with long democratic histories tend to be less corrupt. He believes the risk of exposure of corruption to be higher in more democratic, open societies(Brown and Shackman 2007: 325).

Civil liberties, comprise the freedom of expression and belief, personal autonomy as well as human and economic rights. A government that limits economic rights and civil liberties easily distorts markets, inducing the search for illegal ways to circumvent regulation. This creates opportunities for corruption. (Lambsdorff, 2003: 234).

There exists substantial evidence that corruption reduces the ratio of investment to GDP in a cross-section of countries, see Mauro (1995 and 1997), Knack and Keefer (1995), Campos, Lien and Pradhan (1999), Brunetti, Kisunko and Weder (1997: 23–5) and Brunetti and Weder (1998: 526–8). Corruption is likely to reduce investment, but the resulting decrease in the capital stock will also bring about a lower GDP. High levels of corruption lower, productivity. This lower productivity implies a higher capital stock to be required in order to produce the same output. A higher capital stock, finally, requires increased investments (Lambsdorff, 2003:229–230). On the other hand, Paldam (1999) found the strongest factor reducing corruption is the move from poor to rich (Brown and Shackman 2007: 325).

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