

THE RELATIONSHIP BETWEEN CORRUPTION AND FOREIGN DIRECT INVESTMENT INFLOWS IN TURKEY: AN EMPIRICAL EXAMINATION

M. Umur TOSUN
M. Onur YURDAKUL
Pelin VAROL İYIDOĞAN

M. Umur TOSUN (corresponding author)
Associate Professor, Department of Public Finance, Hacettepe
University, Ankara, Turkey
Tel.: 0090-312-297.8675
E-mail: utosun@hacettepe.edu.tr

M. Onur YURDAKUL
PhD, Finance Expert, Financial Crimes Investigation Board,
Ministry of Finance, Ankara, Turkey
E-mail: moyurdakul@gmail.com

Pelin VAROL İYIDOĞAN
Assistant Professor, Department of Public Finance, Hacettepe
University, Ankara, Turkey
E-mail: pelinv@hacettepe.edu.tr

Abstract

In the corruption literature, most of the studies indicate that corruption has adverse effects on the investment environment and thus it diminishes foreign direct investment (FDI) inflows. However, regarding the so-called adverse effects between FDI and corruption, it is noticed that some studies reached to conclusions in the opposite direction. In this study, the causality relationship among corruption, political risk, industrial production index (as a proxy to gross domestic product) and FDI entrance variables for Turkey over the period 1992M01-2010M12 is analyzed by means of Pesaran, Shin and Smith (2001) bounds test approach of cointegration and error correction methods. As a result, it is found that corruption has distortive effects on FDI in Turkey both for short and long run periods and this indicates that 'helping hand' corruption does not exist in Turkey. In addition, in the long run, FDI increases with raising income. Contrary to the expectations, it is detected that increase in political risk contributes to FDI inflows in the short run.

Keywords: foreign direct investments, corruption, political risk, income, bounds test.

1. Introduction

After the 1980s, foreign direct investments (FDI) performed by the international companies have burst into prominence. Financial liberalization process and globalization triggered by the technological developments mentioned in this period have provoked the establishment of international companies and stimulated different markets for the production and marketing activities with the purpose of getting the edge on competition. In this regard, making a decision about investment in a foreign country requires a multidimensional evaluation. Accordingly, the expectation of earning profit in the country where investment takes place is determined by economic, social and political factors which make FDI become more of an issue.

The effect of corruption as a variable that determines FDI is mentioned in several studies. Although it is mostly supposed that there is a reverse relationship from FDI to corruption in the literature, studies that give opposite results exist as well. Contributing to the literature by examining the mentioned relationship empirically, in terms of Turkish economy where capital movements have liberalized at the end of the 1980s, is the aim in our study. In this regard, in the period of 1992 M01-2010 M12, the causality relationship among corruption, political risk, industrial production index being proxy to GDP and FDI inflows is analyzed by utilizing error correction and cointegration methods based on the bounds test approach of Pesaran, Shin and Smith (2001). In addition, we aim to examine the validity of the 'helping hand' type corruption, which is especially seen in some Asian countries, for Turkey. This approach suggested by Frye and Shleifer (1997) asserts that the income and investment level of an economy could rise although organized corruption is recorded.

Our study consists of three sections. In the first section, the literature about the relationship between corruption and FDI is examined. In the second section, empirical findings, the data and the method which are used in the causality analysis are covered. Finally, in the last section the results and the evaluation are presented.

2. Corruption and FDI relationship: literature review

In the literature that examines the corruption and FDI relationship, it is commonly accepted that corruption will negatively affect the investment choices by creating a risk factor. In this regard, the literature related to our study is categorized in three different types as follows: (i) studies supporting that corruption has a negative effect on FDI (Alesina and Weder, 1999; Campos and Lien, 1999; Abed and Davoodi, 2000; Wei, 2000; Wei and Smarzynska, 2000; Habib and Zurawicki, 2001; Lambsdorff, 2003; Aizenman and Noy, 2006; Mathur and Singh, 2007; Hsu, 2007; Al Sadig, 2009); (ii) studies supporting that corruption effects FDI positively (Hines, 1995; Egger and Winner, 2005); and (iii) studies supporting that FDI has an effect on corruption (Larrain and Tavares, 2004; Pinto and Zhu, 2008; Craigwell and Wright, 2011).

As a study included in the first group, Alesina and Weder (1999, pp. 1-20) find that private capital movements including FDI are negatively affected by corruption increases but foreign government aid originated from the US turns toward the more

corrupt countries. Campos and Lien (1999, p. 1065) state that corruption reduces the ratios of both local and foreign gross investments to GDP. However, it is emphasized that the mentioned effect decreases by the predictability of the corruption. Wei (2000, pp. 316-317) concludes that the triggering effect of corruption on FDI is higher relative to the negative effect of tax increase which is used as another control variable in the study. Wei and Smarzynska (2000, pp. 4-5) assert that foreign investors canalized to the economies with high corruption are in search of local partners, and that corruption triggers the union of the companies which are joint venture type. Abed and Davoodi (2000, pp. 14-15) suggest that corruption as a factor that decreases institutional quality hampers FDI inflows. Habib and Zurawicki (2001, pp. 687-700), which is one of the studies that analyzes the effects of corruption on local and global investments, reach a conclusion that the effect of corruption on foreign investments is more significant in comparison to the impact on local investments. On the other hand, Lambsdorff (2003, pp. 229-243) finds evidence supporting that corruption shows negative effects on foreign investment inflows rather than on the local investments.

Aizenman and Noy (2006, pp. 317-337) conclude that the countries with high trade openness also exhibit high FDI mobility together with low corruption level. Mathur and Singh (2007, pp. 14-16) find that besides the negative effects of corruption on FDI, developing and more democratic countries have less FDI inflows than expected. Hsu (2007) states that an increase in savings has a negative effect on FDI as well as on corruption. Al Sadig (2009, p. 283) determines that corruption shows a negative effect on FDI inflows within the scope of developing countries sample group. Furthermore, the negative effects of corruption on FDI disappear when the rule of law and democracy variables as the indicator of institutional quality are included in the model.

As a study in the second group that suggests that corruption is a triggering factor for FDI, Egger and Winner (2005, pp. 932-952) find that legal quality, human capital quality and real GDP variables have significant and positive effects on FDI attraction. The effects of corruption on FDI show up in the long run and corruption increases FDI inflows. This result is qualified as an empirical proof toward the validity of the 'helping hand' approach. Hines (1995) comes to the conclusion that the US companies lost the competitiveness in the activities that they interfere abroad after the 1977 legal regulations that ban paying bribes in the foreign country business relations. It is concluded that increases in corruption levels had a detractive effect on the 1977 US investment stock in the period of 1978-1982 (Hines, 1995, pp. 10-11, pp. 24-25).

Mathur and Singh (2007) and Campos and Lien (1999), stating that corruption has a detractive effect on FDI, come to the conclusion that the 'helping hand' is valid in some cases. Accordingly, Mathur and Singh (2007, pp. 16-17) establish a reverse relationship between corruption increase in China and Asia region and the FDI inflow turning towards all other countries. On the other hand, Campos and Lien (1999, p. 1064) come to the conclusion that the predictability of corruption will decrease the effect of corruption on investment. Another strand of the literature examines the reverse relationship between the variables, in other words the impact of FDI on the

corruption. In their model investigating the determinants of corruption, Larrain and Tavares (2004, pp. 217-230) find that FDI decreases corruption. Pinto and Zhu (2008, p. 28) present that the marginal effect of FDI on corruption depends on the income level of the country. Craigwell and Wright (2011, pp. 2272-2283) state that there is a bi-directional causality between corruption and FDI with regard to the panel causality analysis. Besides, it is found that the causality runs from FDI to corruption in a nonlinear framework.

3. Econometric analysis of causality relations among FDI, corruption, political risk and GDP in Turkey

Our study examines the impact of corruption together with the income and political risk as other control variables on the FDI after the review of literature on the relationship between corruption and FDI flows.

It is evaluated that the membership negotiation process with EU has an important effect on FDI in Turkey. Such that, as stated in the documents of 2001, 2003 and 2008 National program which published the intentions to undertake the EU acquis in Turkey, it is committed that privatization applications will be speeded up in order to meet the Copenhagen economic criteria¹ and the obstacles will be removed against the foreign direct capital entrance originated from EU² member states.

In this perspective, the foreign investment legislation has been liberalized and bureaucratic obstacles which create an opportunity for the corruption were decreased via Foreign Direct Investment Law no. 4875. Turkey has started the membership negotiations with EU in accordance with the decision taken in 2004, in Brussels, during the meeting of the Council of the European Union which has led to an improvement in FDI inflows.

In the term afterward 2005, while FDI flows to Turkey showed an improvement on one hand, on the other hand it can be seen that Turkey has maintained being a country in which middle level corruption existed. This middle corruption level can be seen in the fragment of PRS Group ICRG, Corruption Index; Transparency International Corruption Perception Index; World Bank Institute and Heritage Foundation indexes. In this context, our study sheds light on the issue of whether corruption and economic and political development levels in Turkey have an effect on FDI and – if there is such an effect, which is its direction.

1 In the fragment of adopted economic criteria in the meeting of 1993 Copenhagen Council of the European Union, it is stated that there must be an active market economy and a capacity to resist to market powers in the Union and the pressure of competition in an EU member state.

2 For the speeding up of the privatization, see 2001 National Program pp. 15-31, 2003 National Program p. 12, 2008 National Program p. 16. For the commitments for removing the obstacles against the foreign direct investment see 2001 National Program pp. 127-134; 2003 National Program pp. 19-20, 2008 National Program pp. 44-49. Source: Ministry for EU Affairs, National Program (available at <http://www.abgs.gov.tr/index.php?p=194&l=1> 04.02.2013).

3.1. Data and method

In our study, the presence of the causality relationship among the FDI, corruption, GDP and the political risk variables in Turkey is analyzed by means of the cointegration and error correction models based on ‘bounds test’ approach developed by Pesaran, Shin and Smith (2001) over the period 1992 (M:1) and 2010 (M:12). The motive behind the choice of bounds testing procedure is that it provides the opportunity of testing long-run relationship regardless to the series are I (0), I (1) or mutually cointegrated. After obtaining evidence of cointegration, the short-run relationship is analyzed by using Granger causality test applied to the error-correction model. In this context, the foreign direct investment data is obtained from the Central Bank of the Republic of Turkey (CBRT) Electronic Data Distribution System.

The FDI series are converted to real series by using consumer price index series obtained from the US Bureau of Labor Statistics. Since monthly GDP series are not available, industrial production index from the Turkish Statistics Foundation which is 99% correlated with GDP series is used as proxy. The presence of 99% correlation between industry production index and GDP series is an important factor for this preference. Because FDI inflows to Turkey have showed a great improvement following the launch of negotiations with EU in 2005, ‘EU’ dummy variable is used as exogenous variable after the beginning of negotiations. Moreover, ‘CRISIS’ dummy variable is included in the model in order to take into account the effects of 1994, 1998, 2000, 2001 and 2008 crisis periods which have led to considerable decreases in GDP and FDI inflows.

Turkey’s corruption and political risk indices are obtained from the ICRG indices published by Political Risk Services (PRS) Group. ICRG corruption index represents obtained and digitized political corruption in related countries while ICRG political risk index illustrates level of digitized and consolidated of the evaluations in the perspective of all risk components formed by group personnel indices. While there is no important difference in the corruption indices of the countries in the short run, it can be observed that the political risk obtained from ICRG index which is effective on the attraction of FDI can show a great difference. PRS – ICRG political risk data involves the components related to variables of government stability, socio-economic conditions, investment profile, internal and external conflict environment, interference of the military on the politics, law-order and state, democratic accountability, ethnical and religion tension, bureaucratic quality. By using this index, we aim to determine whether (i) Turkey is an attraction point for FDI investments, and (ii) whether there is a relationship between political risk and FDI.

The bounds test for the analysis of cointegration relationship among the logarithmic series is applied via conditional error correction model with trend in equation (1).

$$\Delta \ln FDI = \alpha_0 + \alpha_1 t + \theta_1 \ln FDI_{t-1} + \theta_2 \ln COR_{t-1} + \theta_3 \ln PR_{t-1} + \theta_4 \ln PI_{t-1} + \beta_{1i} \sum_{i=1}^k \ln FDI_{t-i} + \beta_{2i} \sum_{i=0}^k \Delta \ln COR_{t-i} + \beta_{3i} \sum_{i=0}^k \Delta \ln PR_{t-i} + \beta_{4i} \sum_{i=0}^k \Delta \ln PI_{t-i} + \mu_1 EU + \mu_2 CRISIS + u_t \quad (1)$$

In equation 1 representing the model with trend, α_0 , t , k , u_t represent the constant term, deterministic trend, order of the VAR system and white noise errors respectively. The model without trend can be estimated from equation (1) by omitting the trend variable. Thus, the bounds test approach is performed by means of the estimated models with and without trend. 5 alternative cases are defined in the testing procedure of Pesaran, Shin and Smith (2001). In all cases, the cointegration is tested by using two statistics which are the F-statistics for the joint significance and the t-statistics suggested by Banerjee, Dolado and Mestre (1998, pp. 267-283) for the significance of each variables. Since asymptotic distributions of each statistics violate standard distributions, obtained results are compared to bounds test critical values suggested by Pesaran, Shin and Smith (2001).

The bounds testing approach in our study is based on the test of Case 3, Case 4 and Case 5, which are defined by Pesaran, Shin and Smith (2001). More clearly, Case 3 involves the test of joint significance of the one lagged FDI, corruption, political risk, industry production index values and test of significance of the one lagged FDI values in the model without trend, while Case 5 tests the same null hypothesis for the model with trend in equation (1). In addition to those, Case 4 embodies the joint significance test of the one lagged variables and trend variable.

According to Pesaran, Shin and Smith (2001) and Banerjee, Dolado and Mestre (1998), if F or t-statistics are higher than the upper bound critical values, the presence of the long run relationship can be claimed. In contrast to that, if F- or t-statistics are less than the lower bound, the null hypothesis of no cointegration cannot be rejected. In the case of statistical values being between the critical values, the result is inconclusive.

After finding evidence of a cointegration, the presence of the long run relationship among the variables in question is reexamined via the model in equation (2) which is estimated by OLS.

$$LNFDI = \alpha_0 + \theta_1 LNCOR + \theta_2 LNPR + \theta_3 LNPI + u_t \quad (2)$$

In the final step, in order to confirm the causality relationship among the variables, we utilize the error correction model which is based on the auto regressive distributed lag – ARDL approach. The presence of long or short run relationship is analyzed through the error correction model in equation (3) which is formed by means of the lagged error terms obtained from equation (2).

$$\Delta \ln FDI = \alpha_0 + \beta_{1i} \sum_{i=1}^{n-1} \ln FDI_{t-i} + \beta_{2i} \sum_{i=0}^{n-1} \Delta \ln COR_{t-i} + \beta_{3i} \sum_{i=0}^{n-1} \Delta \ln PR_{t-i} + \beta_{4i} \sum_{i=0}^{n-1} \Delta \ln PI_{t-i} + \rho ECM_{t-1} + \mu_1 EU + \mu_2 CRISIS + u_t \quad (3)$$

The negative sign and significance of ECM_{t-1} implies the long-run relationship between the variables. Furthermore, the significance levels of β_2 , β_3 and β_4 show the individual and joint causality from corruption, political risk and GDP to foreign direct investment, respectively.

3.2. Empirical results

Following the stationarity tests which yield the results prompting the bounds testing approach for cointegration analysis, we determine the appropriate lag lengths for the models with and without trend. In this context, in order to estimate the appropriate models, first we began testing the difference values of LNFDI, LNCOR, LNPR and LNPI variables until 12 lags. Then we omitted the insignificant lagged values and estimated alternative equations. Afterwards, within the estimated equations, we noted to the equation with lowest Akaike Information Criteria (AIC), Schwarz Criteria (SC) statistics, no serial correlation and heteroskedasticity problems, correct specification length and normal distribution of residual terms. F- and t-statistics obtained from the test of null hypothesis in the estimated models are compared to the critical values in Pesaran, Shin and Smith (2001). The results are reported in Table 1:

Table 1: Analysis results of cointegration model

Model with Trend-ARDL (9,9,1,5)				Model without trend-ARDL (4,5,1,3)		
K	F _{IV}	F _V	t _V	K	F _{III}	t _{III}
3	6.00***	7.43***	-4.72**	3	6.61***	-5.04***
Significance Level	%1	%1	%5	SignificanceLevel	%1	%1
Lower Bound Critical Value	4,30	5,17	-3,41	Lower Bound Critical Value	4,29	-3,43
Upper Bound Critical Value	5,23	6,36	-4,16	Upper Bound Critical Value	5.61	-4.37

Note: *, **, *** denote the significance of %10, %5 and %1 levels respectively

According to the test results, the null of no cointegration is rejected in both models with and without trend at %1 significance level since F- and t-statistics exceed the upper bound critical values. As an exception, Case 4 gives the same result at %5 significance level for the model with trend. Therefore, we can conclude that there is at least one dimensional causality relationship among the FDI, political risk and industry production index series in Turkey.

According to Pesaran, Shin and Smith (2001, p. 20), the long-run relationship among the variables requires the utilization of error term obtained from equation (4) in the error correction model estimated through ARDL approach.

$$LNFDI = -10,389 + 1,796 LNCOR - 1,510 LNPR + 4,324 LNPI + v_t \quad (4)$$

(t-stat)
(-3,270)
(4,690)
(-1,645)
(12,203)

We form the error correction model in equation (3) by using the lagged error correction term (ECM_{t-1}) obtained from equation (2) in order to analyze the short run relationship. The negative sign and significance of error correction term implies both the presence of long-run relationship and the movement of short-run shocks to a long-run equilibrium.

In the estimated error correction model, lag length is determined by using AIC while the validity of the assumptions of classical linear regression model (absence of serial correlation, heteroskedasticity, non-normal distribution of the error terms and

specification errors) are examined by means of Breusch Godfrey, Breusch Pagan Godfrey, Jarque Bera, Ramsey Reset tests, respectively.

According to the test results, ARDL (4,1,1,0) is determined as the appropriate model to examine the short-run relationship between the variables. The estimation results of ARDL (4,1,1,0) model is presented in Table 2 while Granger causality test results based on the ARDL model are given in Table 3 and 4.

Table 2: ARDL (4,1,1,0) estimation results of the short run error correction model

Variable	Coefficient	Standard Error	t- statistic
C	-0.114874	0.073111	-1.571240
Δ LNFDI (-1)	-0.387759***	0.084980	-4.562919
Δ LNFDI (-2)	-0.389134***	0.086228	-4.512856
Δ LNFDI (-3)	-0.163617**	0.077043	-2.123713
Δ LNFDI (-4)	-0.204260***	0.061444	-3.324319
Δ LNCOR	1.954252**	0.969275	2.016200
Δ LNCOR (-1)	-1.781314*	0.976302	-1.824552
Δ LNPR	-3.227701	2.135464	-1.511475
Δ LNPR (-1)	-5.737538***	2.143361	-2.676888
Δ LNPI	0.459311	0.765327	0.600150
ECM (-1)	-0.507888***	0.085289	-5.954883
EU	0.328648**	0.127970	2.568174
CRISIS	0.216815	0.244339	0.887353
Diagnostic Statistics	Statistic	Probability	
BG LM Autocorrelation Test F St.	0,315106	0,7301	
BPG LM Variable Variation Test F St.	1,665014	0,0764	
JB Normality Test	2,613314	0,2707	
RR Specification Length Test	1,097147	0,2961	
AIC: 2,53, SIC 2,73, HQ:2,61			
R ² 0,54,A.R ² 0,51, F -stat. 20,33, DW: 1,97			

Notes: i) *, **, *** show the significance at %10, %5 and %1 levels, respectively.

According to Table 2, the negative sign together with the high value and the significance of error correction term refer to the presence of short-run relationship among the series in question. ‘Strong Granger causality’ which implies the test for the significance of error correction term together with all independent variables by means of Wald test and F-statistic provides the examination of long-run relationship from the error correction model.

Table 3: Granger causality tests

Null Hypothesis	Wald Tests	F Statistics (Probability Value)	Result
LNCOR, LNPR, LNPI are not Granger - cause of LNFDI	1. $H_0: \beta_{2i} = \beta_{3i} = \beta_{4i} = 0$	3,588 (0,00)	H_0 rejected, significant
	2. $H_0: \beta_{2i} = \beta_{3i} = \beta_{4i} = \rho = 0$	8,938 (0,00)	H_0 rejected, significant
	3. $H_0: \beta_{2i} = 0$	3,909 (0,02)	H_0 rejected, significant
	4. $H_0: \beta_{3i} = 0$	4,326 (0,01)	H_0 rejected, significant
	5. $H_0: \beta_{4i} = 0$	0,647 (0,42)	H_0 not rejected, insignificant
	6. $H_0: \rho = 0$	-6,06 (0,00)	H_0 rejected, significant

The analysis results given in Tables 3 and 4 show that both corruption and political risk Granger cause FDI inflows in the short run. Furthermore, an interaction between FDI and corruption control index in the same direction, but a reverse relationship between FDI and political risk index are found. Although we reach a result of positive relationship between production improvement and FDI, in the short-run the relationship becomes insignificant. The short run causality made in this way with the help of F-test can be specified as ‘weak Granger causality’ (Asafu-Adjaye, 2000, p. 619; Mehrraand Firouzjaee, 2011, p. 227).

Table 4: Granger causality test – summary table

Depended Variable	Causality Type					
	Short Run Effects (F Statistics)				Long Run Effect (t -stat.)	Strong Causality (F stat.)
	Δ (LNFDI) _{ti}	Δ (LNCOR) _{ti}	Δ (LNPR) _{ti}	Δ (LNPI) _{ti}	ECM _{t-1}	Δ (LNCOR) _{ti} , Δ (LNPR) _{ti} , Δ (LNPI) _t and ECM _{t-1}
Δ (LNFDI) _t	-	3,984**	3,984** (-)	0,360	-5,95***	8,707***

Notes: i) *, **, *** show the significance at %10, %5 and %1 levels, respectively
 ii) (-) sign in the parenthesis expresses that causal relationship is in the negative direction.

Although we find income growth as a causing variable for FDI inflow in the long run, a significant relationship between the index value and FDI is not confirmed in the short run. As an explanation for this finding, both the possible effect of the usage of monthly series and the direct investment being a long-run activity which prevents the reaction of investors against the risks in short-run should be considered.

4. Concluding remarks

Our study confirms that the causality runs from corruption to the FDI in the Turkish economy for the period in consideration. Therefore, it is obvious that the control of corruption improves FDI inflows. More briefly, ‘helping hand’ type corruption being common in some Asian countries as analyzed by Hines (1995), Egger and Winner (2005) is not valid for Turkey. On the other hand, regarding the political risk and FDI relationship, it is found that increase in the political risk develops FDI inflows in the short run. Furthermore, income growth and negotiations of EU membership are found to have positive effects on FDI.

EU dummy variables are strongly significant in both cointegration and error correction equations. In the negotiation process for EU membership, the obstacles are eliminated for the foreign investors and privatization applications are speeded up. Thus, FDI inflows showed an improvement trend. From the result it can be assessed that FDI inflows to Turkey were not affected negatively from the increasing political risk in the short run. Investors are assumed to take their positions in the perspective of economical parameters and EU process since the industry production index as a proxy to GDP has positive effects on FDI inflows in the long run. In addition, in the long run the political risk variable is getting marginally insignificant. Thus, in parallel to the findings of Lamsdorff (2003), Mathurand Singh (2007), Hsu (2007), it can be commented that economic freedom is more important than the political risks for FDI directed towards Turkey.

It should be evaluated that the argument of 'irreversible but delayable investment' which is developed by Pindyck (1990) may be valid for Turkey. Pindyck (1990, pp. 1-5) supports that it is impossible in most cases to recover the investment decision due to higher sunk costs, but investors can delay the entrance on the market under risks which can affect the cash flow expected from the investment and final cost. Within the context of our study, it may be assessed that although the investors have not changed the investment decision against the developing risk of politics of Turkey in the short run, it is possible to delay investing in order to evaluate the effects of these risks on the economic stability. This may constitute another possible explanation of political risk and FDI relationship in Turkey as the unexpected short run relationship which disappears in the long run.

Finally, we conclude that the FDI inflow to Turkey represents market and efficiency seeking characteristics as FDI is positively affected from the convenience on the entrance of market, economic stability, political consistency and combating corruption.

References:

1. Abed, G.T. and Davoodi, H.R., 'Corruption, Structural Reforms and Economic Performance in the Transition Economies', IMF Working Paper, WP/00/132, 2000.
2. Aizenman, J. and Noy, I., 'FDI and Trade – Two Way Linkages?', 2006, *The Quarterly Review of Economics and Finance*, vol. 46, no. 3, pp. 317-337.
3. Al Sadig, A., 'The Effects of Corruption on FDI Inflows', 2009, *CATO Journal*, vol. 29, no. 2, pp. 267-294.
4. Alesina, A. and Weder, B., 'Do Corrupt Governments Receive Less Foreign Aid?', National Bureau of Economic Research, Working Paper no. 7108, 1999.
5. Asafu-Adjaye, J., 'The Relationship Between Energy Consumption, Energy Prices and Economic Growth: Time Series Evidence from Asian Developing Countries', 2000, *Energy Economics*, vol. 22, no. 6, pp. 615-625.
6. Banerjee, A., Dolado, J.J. and Mestre, R., 'Error-Correction Mechanism Tests for Cointegration in A Single-Equation Framework', 1998, *Journal of Time Series Analysis*, vol. 19, no. 3, pp. 267-283.
7. Campos, J.E. and Lien, D., 'The Impact of Corruption on Investment: Predictability Matters', 1999, *World Development*, vol. 27, no. 6, pp. 1059-1076.

8. Central Bank of the Republic of Turkey, CBRT, 'Balance of Payment Statistics', [Online] available at <http://www.tcmb.gov.tr/>, accessed on June 3, 2013.
9. Craigwell, R. and Wright, A., 'Foreign Direct Investment and Corruption in Developing Countries: Evidence from Linear and Non-linear Panel Granger Causality Tests', 2011, *Economics Bulletin*, vol. 31, no. 3, pp. 2272-2283.
10. Egger, P. and Winner, H., 'Evidence on Corruption as an Incentive for Foreign Direct Investment', 2005, *European Journal of Political Economy*, vol. 21, no. 4, pp. 932-952.
11. Frye, T. and Shleifer, A., 'The Invisible Hand and the Grabbing Hand', 1997, *The American Economic Review*, vol. 87, no. 2, pp. 354-358.
12. Habib, M. and Zurawicki, L., 'Country Level Investments and the Effect of Corruption – Some Empirical Evidence', 2001, *International Business Review*, vol. 10, no. 6, pp. 687-700.
13. Hines, J.R., 'Forbidden Payment: Foreign Bribery and American Business after 1977', NBER Working Paper no. 5266, 1995.
14. Hsu, Y.H., 'Is Corruption a Grabbing Hand? A Panel Data Study of FDI', Graduate Institute of Political Economy, National Cheng Kung University, Taiwan, 2007, pp. 1-18, [Online] available at <http://udd.ord.ncku.edu.tw/ezfiles/78/1078/img/510/970106.pdf>, accessed on December 10, 2011.
15. Lambsdorff, J.G., 'How Corruption Affects Persistent Capital Flows', 2003, *Economics of Governance*, vol. 4, no. 3, pp. 229-243.
16. Larrain, F.B. and Tavares, J., 'Does Foreign Direct Investment Decrease Corruption?', 2004, *Cuadernos De Economia*, vol. 41, pp. 217-230.
17. Mathur, A. and Singh, K., 'Foreign Direct Investment, Corruption and Democracy', AEI Working Paper 135, American Enterprise Institute for Public Policy Research, 2007.
18. Mehrara, M. and Firouzjaee, B.A., 'Granger Causality Relationship between Export Growth and GDP Growth in Developing Countries: Panel Cointegration Approach', 2011, *International Journal of Humanities and Social Science*, vol. 1, no. 16, pp. 223-231.
19. Ministry for EU Affairs, National Programme, [Online] available at <http://www.abgs.gov.tr/index.php?p=194&l=1>, accessed on February 4, 2013.
20. Pesaran, M.H., Shin, Y. and Smith, R.J., 'Bounds Testing Approaches to the Analysis of Level Relationships', 2001, *Journal of Applied Econometrics*, vol. 16, no. 3, pp. 289-326.
21. Pindyck, R., 'Irreversibility, Uncertainty and Investment', NBER Working Paper no. 3307, 1990.
22. Pinto, P.B. and Zhu, B., 'Fortune or Evil? The Effects of Inward Foreign Direct Investment on Corruption', 2008, Saltzman Working Paper no. 10, [Online] available at <http://www.siwps.com/programs/SWP.attachment/no-10---pinto/No%2010%20-%20Pinto%20Zhou.pdf>, accessed on September on 11, 2013.
23. PRS Group, 'ICRG Methodology', [Online] available at http://www.prsrgroup.com/ICRG_Methodology.aspx, accessed on August 10, 2011.
24. Transparency International, *TI Source Book 2000. Confronting Corruption: The Elements of a National Integrity System*, Berlin, 2000.
25. Wei, S.J. and Smarzynska, B.K., 'Corruption and the Composition of Foreign Direct Investment, Firm Level Evidence', The World Bank Policy Research Working Paper, WPS 2340, 2000.
26. Wei, S.J., 'Local Corruption and Global Capital Flows', 2000, *Brookings Papers on Economic Activity*, vol. 2, pp. 303-354.