Effect of judıcıal independence to FDI into Eastern Europea and South Asia

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15 September 2012

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Abstract- In this paper, we investigate the impact of judicial independence on foreign direct investment (FDI) into Southern Europe and South Asia. The panel least square method is employed to estimate the relationship between FDI and its potential macroeconomic and instutional determinants using a sample of 28 developing countries for the period of 1990-2010. The findings show that a 10% percentage increase in judicial independence of the host country in the previous one year increases the FDI inflows to Eastern Europe and South Asia about 2,7% and 1,3% respectively. The findings also show that the size of economic activity (GDP and GDP per capita), deposit interest rate, trade opennes, and lagged FDI are main determinants of FDI inflows to host country.

Key words- Judicial independence, foreign direct investment, panel least square, Sothern Europe, South Asia,

JEL Classification- F21, C23, F55

1. Introducton

A tremendous growth in foreign direct investment (FDI) has been seen with the help of economic and financial liberalisation attempts since the early 1990s and trade reforms, (Ali & Guo, 2005: 21). Although world FDI flows were 15 per cent below their pre-crisis average in 2010, FDI flows rose moderately to $1.24 trillion, and developing and transition economies together attracted more than half of global FDI flows (UNCTAD, 2011). The share of developing countries in world FDI inflows has continued to rise. These FDI inflows play a crucial role in promoting economic growth and development of less developed and developing countries by increasing the volume of investment and its efficiency (LI, 2005: 393) and by transferring financial and physical capital to host country. Moreover, foreign direct investment enhances job creation, managerial skills and transfer of technology. (Wafurea &Nurudeen, 2010: 26; Borenszteina, et.al., 1998).

These positive contribution of FDI inflows to economic activity of host countries have resulted in a wehemently competition between developing countries to attract more FDI.
These countries have accelerated improvement of corporate infrastructure, made reforms in legal structure, trade and tariffs to establish convenient condition for foreign investments.
Beacuse some economist (Bénassy-Quéré, et.al., 2007; Bevan, et.al., 2004; Xu & Shenkar, 2002) suggest that foreign investors demand quality domestic instutions and infrastructure to invest their bussines operations. Indisputably, countries having powerful and reliable instutional conditions and infrastucute will attract more FDI. Quality domestic institutions includes, efficient protection of civil and property rights, extended economic and political freedom, low level of corruption, less investment risk, government stability, bureaucracy quality and judicial independence which are in particular shown to be associated with higher prosperity (Bénassy-Quéré, et.al., 2007; Kayam, 2006). Such a condition lowers investment and risk cost of foreign investors.

There are many characteristics determining the performance of a country with respect to atracting FDI: its location, high purchasing power, good acces to larger markets, cheaper labour and natural resources, easier acces to production factors (Hisarciklilar, et.al., 2007)
Beside these macroeconomic variables, institutional variables are also widely regarded as a crucial locational advantage of host countries aiming to attract FDI (Bevan, et.al., 2004). Instutional variables like quality of bureaucracy, corruption, protection of property rights, military interference in rule of law and politics, integrity of the legal system, judicial independence and and regulatory restrictions on sale of real properties are also important determinant of FDI (Gwartney, et.al., 2011).

This paper answers two questions: What are the determinants of FDI to Eastern Europe and South Asia? Does judicial independence has a significant impact on FDI for these regions.
For these purpose, in this study, I try to identify macroeconomic and institutional determinants of foreign direct investment into developing countries. For this purpose, FDI inflows of 28 developing countries from the regions South Asia and Eastern Europe over the period 1990-2010 is investigated with panel least square method.[1] According to our econometric findings FDI is positively related to the judicial independence among instutional variables both for South Asia and Eastern Europe. We also find that income per capita variable, market size indicator, is an important determinant of FDI driving FDI inflows to the country.

The rest of the paper is organised as follow: first we give an overview of literature on FDI determinants in section 2. Section 3 and 4 introduces the model, data and the methodolog used for the analysis. Panel regression estimation result is presented in section 5 followed by a conclusion and policy recommendations in section 6.

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[1] List of country concerned is given at Appendix Table A1

2. Data and Methodology

In this study, a panel of 28 countries-12 from Eastern Europe, 16 from South Asia- (see the Appendix Table A1 for the country list) is used to estimate a fixed effect model of FDI inflows determined by host country factors including 'judicial independence' for the period 1990-2010. The institutional variables are obtained from Fraser Institute Economic Freedom of the World 2011 Annual Report, and the other macroeconomic indicators are obtained from the World Bank's World Development Indicators. The definiton and expected signs of varibles are presented in table 1, summary statistics of data and correlation matrix is shown in Appendix Table A2 and A3 respectively. Standart deviation of variable inflation and deposit interest rate are very high in which means that volatility of these variables differ a wide range in our sample. The correlation between judicial independence and foreign direct investment is as expected both positive and high. According to these tables and variance inflation factor (VIF) test results (Appendix Table A4), there are no general econometric problems with the data (Buckley, 2007). Also, the natural logarithm of FDI is used.

Table 1. Variables, Definitions and Expected Signs

VARIABLES	DEFINITION	EXPECTED SIGN
FDI	Foreign direct investment, net inflows (BoP, current US$)	-----
JUD	judicial independence, ranges between 1 and 10	+
GDP	GDP growth (annual %)	+
GDPP	GDP per capita growth (annual %)	+
INT	Deposit interest rate (%)	-
OPEN	Trade (% of GDP)	+
CPI	Inflation, consumer prices (annual %)	-

Eastern Europe and South Asia countries have been source of capital inflows since the communist regime collapsed or changed to a new variant of capitaism. These countries are now accepted as developing countries. But in our study, these developing countries are quite heterogenous in both economic and instituonal aspects. Therefore, beside estimating a single equation for all of these countries, we also make our estimation on regional bases for Asia and Europe in two different groups. In these groups Asia refers to South Asia, and Europe mostly refers to West Europe countries

Before estimation, we have performed a stationary test (unit root) since the variables may incorporate unit roots. Fischer-Augmented Dickey Fuller (ADF) panel unit root test is employed on our variables. The null hypotesis in ADF Fischer Unit Root Test is that all series have unit root, against the alternative hypotesis claiming that some series are stationary. The result of unit root test is shown in Table 1.

Table 1. ADF Fischer Unit root Test for variables.

variables	Level		First difference		Decision
	ADF - Fisher Chi-square Statistic	**Prob.***	**ADF - Fisher Chi-square Statistic**	**Prob.***	**Decision**
LFDI	60.7188	0.3097	198.146	0.0000	stationary at first difference
JUD	28.4889	0.9992	204.460	0.0000	stationary at first difference
GDP	183.474	0.0000	-	-	stationary at level
GDPP	195.243	0.0000	-	-	stationary at level
INT	711.539	0.0000	-	-	stationary at level
OPEN	22.5135	1.0000	374.941	0.0000	stationary at first difference
CPI	223.263	0.0000	-	-	stationary at level

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

The test statistics of unit root test reveal that the foreign direct investment, judicial independence and trade openness are stationary at first difference, However growth, per capita growth, deposit interest rate and inflation are stationary at level. To avoid spurious regression, we investigate the cointegation between variables in long-term applying Kao panel cointegration test. The Null Hypothesis saying there is no cointegration is rejected,[2] i.e in long –term variables can be regressed in the same model without taking difference. Next we run the regression, and results of all estimations are presented in next section. Before estimation, we should decide the estimation method. As we do not know whether the random effects are uncorrelated with the explanatory variables or not, we employ a Hausman (1978) test to compare the fixed and random effects estimates of coefficients (Eviews, 2006). As it is seen from Table 2, we rejected the null hypothesis of Hausman test saying there is random effects, that is, we should use fixed effects model for estimation.

3. Results
Estimation results are reported in Table 2. The value of R^2 of 0,853 means that about 85% of the variation in foreign direct investment inflows to Eastern Europe and South Asia is explained by explanatory variables. The value and the proability of F-statistic also show that the estimated model has a good fit and explanatory variables are succesfull to explain changes in FDI. Additionaly, the comparison of the estimation results by region reveals the heterogenity in whole sample and supports our decision to divide whole sample to two subgroups.

As shown in Table 2, the relationship between foreign direct investment and judicial independence, growth, per capita and lagged FDI is positive and significant for whole sample and Eastern Europe as expected, but growth and per capita is insignificant for South Asia. These estimation results suggest that the more judicial independence means the more FDI inflows to the country. For example, a 10% percentage increase in judicial independence of the host country in the previous one year increases the LFDI inflows to Eastern Europe and South Asia about 2,7% and 1,3% respectively. In other words, the legal structure of Eastern Europe is more sound than South Asia. Therefore, when E.Europe makes improvement in its judicial independence, the amount of FDI attracted is nearly two times more than S.Asia does. Although, our findings correspond to other studies on FDI and instutional variables (Bénassy-Quéré, et.al, 2007; Bevan, et.al, 2004; Altomonte, 2000; Asiedu, 2006), Kayam (2006) has found that Among the institutional variables, bureaucracy quality, investment risk and government stability have no significant impact on FDI inflows (Kayam, 2006: 15).

The estimation results also illustrate that host country inflation and trade openness are statistically significant and positively related to foreign direct investment but have a less reliably effect on FDI

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[2] Kao Residual Cointegration Test Statistic is -2.207352 and its probability is 0.0136

inflows both for Eastern Europe and South Asia. CPI enters with the wrong sign in whole sample and its subgroups, an even the coefficients of CPI is near insignificant

Similarly, the results show that deposit interest rate has a positive and significant but less effective on FDI inflows in both regions. A 1% increase in deposit interest rate leads to a 1,6% and 3,5% decrease in FDI for Eastern Europe and South Asia respectively.

Table 2. Estimation Results

	WHOLE SAMPLE	EASTERN EUROPE	SOUTH ASIA
JUD(-1)	0,145** (-2,33)	0,276 ** (-2,334)	0,135*** (3,878)
GDP	0,154** (-4,798)	0, 418* (3,554)	0,082 (-0,745)
GDPP	0,119 *** (-1,758)	0,405* (-3,489)	0,100 (0,900)
INT(-1)	-0,007* (-4,236)	-0,016* (-6,774)	-0,035* (-3,522)
OPEN(-1)	-0,002 (-1,055)	0,023* (5,623)	0,009* (3,876)
CPI(-1)	0,001 (0,755)	0,001*** (1,684)	0,02** (2,023)
LFD(-1)	0,113** (2,254)	0,152*** (1,884)	0,067 (0,802)
CONSTANT	22,231* (51,546)	19,903* (26,646)	20,188* (25,544)
R-square	0,853	0,644	0,819
Adjusted R-squared	0,832	0,605	0,800
F-statistic	43,324	17,466	44,316
Prob(F-statistic)	0,000	0,000	0,000
Hausman statistic	51,345	34,745	62,544
model type	FE	FE	FE
No. Obs.	430	235	195

-***, ** and *** shows 10%, 5% and 1% significance level respectively.
-t statistics in parentheses

Market size indicators GDP and GDP per capita of host country are found to be significant in attracting FDI into whole sample and E.Europe, but insignificant for S.Asia, and the variable has correct sign as expected. If the market size growth increases 1%, FDI inflows will rise by 0,4%. This is consistent with studies of (Wafureα & Nurudeen, 2010), (Koyuncu, 2010) and (Obwona, 1997). This suggest that larger market size have a better attracting performance on FDI into host market.

In conclusion, it can be argued that judicial independence (JUD) and market size (GDP and GDPP) play a crucial role in attrracting FDI into country. It is clear that judicial independence and market size have increased FDI in E.Europe and S.Asia between 1990-2010.
The key explanation of cross-country differences in impact of macroeconomic and instutional variables on FDI in S.Asia and E.Europe is that investors feel S.Asia a difficult location for bussines activities, and quality of domestic institutions is this region inefficient to atrract investors. Additionally, transportation cost is high and acces to export markets are not easy (Obwona, 1997). Therefore, the common perception is that FDI inflows to South Asia is largely driven by natural resources, cheap labour power and market size, and this perception seems to be consistent with the findings of some authors (Asiedu, 2006: 63).

4. Conclusion and Policy Implications

In this paper, we examine the impact of judicial independence on foreign direct investment. The crucial importance of FDI inflow to a developing country, transition of the formerly centrally planned economies of Eastern Europe to market economy, South Asia's being a huge population growth area and consumption not having reached the desired level, and recent search on FDI flows to developing countries are main motivations of this study and reason of region selection. Because all these reasons can create ideal conditions, at least in principle, for the attraction of transnational investment. The panel least square method is employed to estimate the relationship between FDI and its potential macroeconomic and instutional determinants using a sample of 28 developing countries for the period of 1990-2010. The findings show that the size of economic activity (GDP and GDP per capita), deposit interest rate, trade opennes, judicial independence and lagged FDI are main determinants of FDI inflows to host country.

Empirical findings have two important policy implications. Firstly, since judicial independence has a significant impact on FDI inflows to home country for both E.Europe and S.Asia, governments should make improvement in their legal system and try to increase their judicial independence to attract more FDI into country. Because foreign inverstors believe that a crucial element of a democratic society is the judicial independence, so they want to take investment risk of their bussines operations in democratic society.

Secondly, as growth performance and disposable income per capita have significant effect on FDI in whole sample, each country should increase its production volume and try to get a less fluctuated and sustainable growth performance to atrract more FDI. Transnational inverstors should be certain that host country can create sufficient market for their manufacture. Since, both South Asia and Eastern Europe have not yet reached their desired consumption level, each percentage increase in disposable income will encourage investors to invest these countries.

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Appendix

Table A1. List of countries in the Study

Armenia	Latvia
Azerbaijan	Lithuania
Bosnia herzegovina	Malaysia
Bulgaria	Mongolia
China	New zealand
Croatia	Philippines
Czech republic	Romania
Estonia	Singapore
Georgia	Slovak republic
Hong kong	Slovenia
Hungary	Thailand
İndonesia	Turkey
Japan	Ukraine
Korea republic	Vietnam

Table A2. Summary Statistics

	LFDI	JUD	INT	GDPP	GDP	CPI	OPEN
Mean	21.22066	4.964265	14.87559	3.773561	4.324244	32.18754	113.6745
Median	21.31329	4.680000	6.960000	4.550000	5.060000	5.070000	97.23000
Maximum	25.94406	9.560000	658.5100	25.11000	26.40000	4734.910	445.9100
Minimum	15.74703	1.800000	0.000000	-22.55000	-22.93000	-8.530000	16.01000
Std. Dev.	1.807716	1.884798	40.67466	5.272953	5.376280	237.7676	79.29441
Observations	483	483	483	483	483	483	483

Table A3. Correlation Matrix

	LFDI	JUD	INT	GDPP	GDP	CPI	OPEN
LFDI	1,0000						
JUD	0,3215	1,0000					
INT	-0,3323	-0,1119	1,0000				
GDPP	0,1490	-0,2035	-0,3309	1,0000			
GDP	0,2128	-0,1563	-0,3276	0,9756	1,0000		
CPI	-0,1479	-0,0034	0,4340	-0,2868	-0,2877	1,0000	
OPEN	0,2949	0,3356	-0,1055	0,0180	0,0787	-0,0516	1,0000

Table A4. VIF test

variable	VIF	1/VIF
LFDI	7,34	0,14
JUD	5,44	0,18
INT	3,65	0,27
GDPP	1,45	0,69
GDP	1,97	0,51
CPI	2,45	0,41
OPEN	2,02	0,50