Political Stability and Foreign Direct Investment

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Abstract

The paper investigates the relationship among the foreign direct investment (FDI) and political stability by investigating the country-level FDI flows, FDI inward performance and political stability measures. Countries with high political rights have higher FDI outflows. Also, countries with high level of corruption of government and low level of democracy have higher FDI inflows. The results are consistent with the argument of that political factors are important in explaining FDI flows. We also find that FDI inward performance has consistently positive relationships with the level of corruption of government, while negative relationships with the political rights, when key variables from factor analysis are included.

Keywords: Corporate governance, Political stability, The quality of government, Foreign direct investment

JEL classification: F21; G15; K22

Introduction

Foreign direct investment (FDI) has become the important issue in finance and economics since the globalization of capital markets. The saturation of domestic capital market drives each country to invest in the foreign capital markets in terms of financial internationalization. Recently, emerging market countries, especially China and India, become the world's foremost FDI targets. From the World Bank (2002) report, we can see that net FDI to developing countries has increased since 1985.

Many researchers in finance and economics try to find the factors that affect the FDI. For example, Lucas (1990) argues that only political risk is an important factor in limiting capital flows. Investments in many developing countries are exposed to large political risks, so FDI inflows are large for politically unstable countries. By the same token, FDI outflows are large for politically stable countries to invest in countries with large political risks. Fry, Classens, Burridge, & Blanchet (1995) found that the requirement to surrender export proceeds to the monetary authorities and the existence of special exchange rates for some capital account transactions reduces the probability that FDI is independent. The more liberal a country's foreign exchange system, the more likely FDI is to be independent or exogenous. FDI is associated with a larger increase in capital formation when it is independent than when it is "Granger-caused" by other capital flows. Singh and Jun (1995) also show that political risk and business operating conditions have been important determinants of FDI for countries that have historically attracted high FDI. For countries with relatively low FDI, a key determinant was the degree of sociopolitical instability. A country's orientation toward exports is the strongest variable for explaining why a country attracts FDI. Chan and Gemayel (2004) find that the degree of instability associated with investment risk is a much more critical determinant of foreign investment in the Middle East and North Africa region countries than it is for developing countries, which have lower level investment risk.

There are other factors, including above-mentioned ones, of FDI. They are macroeconomic determinants (Hymer, 1960; Agmon and Lessard, 1977; Froot and Stein, 1991), internalization theory (Johanson and Vahlne, 1977), intangible assets (Morck and Young, 1992; Markides and Ittner, 1994; Denekamp, 1995), capital market mispricing (Baker, Foley, & Wurgler 2006), shareholder's wealth effect (Desai, Dukas, & Fatemi, 1995; Strickland and Hamaifar, 1990) and stock market liberalization and corporate governance (Demirguc-Kunt and Levine, 1996; Henry, 2000a,b; Admati and Pfleiderer, 2000).

1. Hypothesis

In view of related literature, we can see that there are numerous factors that affect FDI, but not dominant factors. The objective of this paper comes from the Lucas (1990)'s argument that only political risk is an important factor in limiting capital flows. According to his paper, either human capital based approach or monopoly rents approach is not an important factor in explaining capital flows. For the empirical support and extension of his argument, we examine the following hypothesis.

Hypothesis 1: FDI inflows are high for politically unstable countries, while FDI outflows are high for politically stable countries, after controlling for macroeconomic factors.

La Porta et al. (1999) constructs the quality of government index around the world. They divide government quality variables by five categories, and find that rich nations have better governments than poor ones. Ethnolinguistically homogenous countries have better governments than the heterogeneous ones. Common law countries have better governments than French civil law or socialist law countries. Predominantly Protestant countries have better governments than either predominantly Catholic or predominantly Muslim countries. The quality of governments also is closely related to its interference with private sectors. However, they did not mention whether the political stability of governments goes hand in hand with its interference with private sectors. From their five categories, we use the direct measure of political stability. They are corruption index in the government efficiency category and political rights index and democratic index from political freedom category. (Note 1) Corruption index is the index of corruption in government (on a scale from 0 to 10) from International Country Risk Guide (ICRG). Low corruption index means high political stability. Political rights index is the index of political rights from Freedom of the World, 1996. Democracy index is the average of democracy score for the period 1970-1994 (on a scale from 0 to 10) from Polity III: Regime Type and Political Authority, 1800-1994. High political rights index and democracy index mean high political stability.

We know that the quality of government is closely related to its interference with private sectors, leading to the performance of private sectors. However, we do not know whether the political stability of government is related to its interference with private sectors. We argue that political stability measures are closely related to the performance of the private sector in general, and it will also affect the FDI inward performance, by looking at the recent economic development of China and Russia. (Note 2) Their line of reasoning is also consistent with the view of Lucas (1990), because politically unstable countries attract more capital flows which lead to the higher possibility of better performance of FDI. By combining the argument of Lucas (1990) and La Porta et al. (1999), we can construct a following hypothesis.

Hypothesis 2: FDI inward performance is high for politically unstable countries, after controlling for macroeconomic factors.

The remaining paper proceeds as follow. Section 3 describes the econometric techniques and the model setup that are used in this paper. Section 4 explains data and variable construction. Section 5 shows empirical results. Section 6 ends the paper.

2. The Review of Econometric Techniques and Model Setup

Since our sample is the panel data, we perform three different empirical techniques for the panel data to strengthen our empirical results. First, we perform pooled ordinary least squares (OLS) with robust standard errors for the panel data using robust (cluster) covariance matrix as in Wooldridge (2002). According to Wooldridge (2002), the error term in the panel data will be serially correlated, even if the pooled OLS meets the consistency assumption. Also, the serial correlation does not decrease as the cross-section and time-series increases. So, we need to use robust (cluster) covariance matrix.

Second, we perform feasible generalized least squares (GLS) for the cross-sectional time-series linear models as in Wooldridge (2002). This technique allows estimation in the presence of AR(1) autocorrelation within panels and cross-sectional correlation and heteroskedasticity across panels.

Third, we perform the random effects estimation of the panel data. The statistical evidence of the presence of random effects is given by the Lagrangian Multiplier test, not reported, as in Breusch and Pagan (1980). The Chi-squared test statistic rejects the null hypothesis of no unit specific unobserved effect, inferring there is a unit specific error component. So, the regression models used in the empirical results section are as follow.

$$\text{FDI}_{\text{outflows},i,t}(X10^{-3}) = \beta_1 * corrupt_{i,t} + \beta_2 * political_{i,t} + \beta_3 * democratic_{i,t} + \beta_4 * \log(GDP)_{i,t}$$
$$+ \beta_5 * \log(ExRate)_{i,t} + \beta_6 * \log(CorpTax)_{i,t} + \beta_7 * CAC_{i,t} + c_i + u_{i,t} \quad (1)$$

$$\text{FDI}_{\text{inflows},i,t}(X10^{-3}) = \beta_1 * corrupt_{i,t} + \beta_2 * political_{i,t} + \beta_3 * democratic_{i,t} + \beta_4 * \log(GDP)_{i,t}$$
$$+ \beta_5 * \log(ExRate)_{i,t} + \beta_6 * \log(CorpTax)_{i,t} + \beta_7 * CAC_{i,t} + c_i + u_{i,t} \quad (2)$$

$$\text{FDI}_{\text{performance},i,t} = \beta_1 * corrupt_{i,t} + \beta_2 * political_{i,t} + \beta_3 * democratic_{i,t} + \beta_4 * \log(GDP)_{i,t}$$
$$+ \beta_5 * \log(ExRate)_{i,t} + \beta_6 * \log(CorpTax)_{i,t} + \beta_7 * CAC_{i,t} + c_i + u_{i,t} \quad (3)$$

, where i=1, …, 28, t=1990, …, 2002 and the composite error is $v_i=c_i+u_{i,t}$ with $u_{i,t}$ ~ iid. c_i is a unit specific error component. $u_{i,t}$ is the idiosyncratic error component. $\text{FDI}_{\text{outflows},i,t}(X10^{-3})$, $\text{FDI}_{\text{inflows},i,t}(X10^{-3})$ and $\text{FDI}_{\text{performance},i,t}$ is

the foreign direct investment outflows divided by 1000, the foreign direct investment inflows divided by 1000 and the foreign direct investment inward performance (three year average) for the country i in the year t, respectively. (Note 3) $corrupt_{i,t}$, $poiltical_{i,t}$ and $democratic_{i,t}$ is the corruption index, political rights index and democratic rights index from La Porta et al. (1999) for the country i in the year t, respectively. $\log(GDP)_{i,t}$, $\log(ExRate)_{i,t}$, $\log(CorpTax)_{i,t}$ and $CAC_{i,t}$ is the natural log of three year average GDP, the natural log of real exchange rate, the natural log of the marginal corporate tax rates and the capital account closedness measure as in Brune, Garrett, Guisinger, & Sorens (2001) for the country i in the year t, respectively.

3. Data and Variable Description

Different data sources are used in this paper. FDI data is from World Investment Report (WIR) Annex Tables, the United Nations Conference on Trade and Development (UNCTAD). World Investment Report Annex Tables provide detailed statistical data on FDI flows, FDI stock and cross-border mergers and acquisitions. We use three year average FDI inflows, FDI outflows and the performance of FDI inflows as dependent variables in the regression analysis. We matched the latest year of the three year to the year of controlling variables. (Note 4) The three year average of FDI inflows is the three year average foreign direct investment inflows in millions of dollars. The three year average of FDI outflows is the three year average foreign direct investment outflows in millions of dollars. The three year average performance of FDI inflows is the three year average inward foreign direct investment performance index. If the performance is better, the index shows greater value. These variables are all from World Investment Report (WIR) Annex Tables, the United Nations Conference on Trade and Development (UNCTAD).

Controlling variables are as follow. GDP is the three year average GDP in millions of dollars. Three of them come from World Investment Report (WIR) Annex Tables, the United Nations Conference on Trade and Development (UNCTAD). The real exchange rate is calculated using nominal exchange rates and price indices from the IMF International Financial Statistics. The exchange rate series are indexed with the dollar exchange rate in 1989 set to 1 in each country. (Note 5) There are several papers analyzing the relationship between exchange rate and FDI (Froot and Stein, 1991; Klein and Rosengren, 1994; Dewenter, 1995; Blonigen, 1997). Corporate top tax rates, which are the maximum marginal corporate tax rates in each country and year, are from the World Tax Database maintained by the Office of Tax Policy Research at the University of Michigan. There is a paper investigating the relationship between tax rate and FDI (Desai et al., 2004). Capital account openness is based on Brune et al. (2001). We form a closedness index, using Brune et al. (2001) data, as the way in Baker et al. (2006). Political stability measures are described briefly in the introduction section. The detailed description of the political stability measures, as in La Porta et al. (1999), and that of other variables used in this paper are provided in Table 1.

Insert Table 1 about here

4. Empirical Results

4.1 Summary Statistics

Insert Table 2 about here

Descriptive statistics for the entire sample is presented in Table 2. The definitions of the variables are the same as the ones in Table 1. Total of 305 country year observations are in the sample from 1990 till 2002 spanning 28 countries. Some countries have missing real exchange rate data, so the exchange rate series for these countries are indexed with the dollar exchange rate in the year that is observed first. Democratic index (democratic) and public sector employment ratio (PSEmpRatio) are missing for Hong Kong. Government consumption expenditures (GC/GDP) and total government transfers and subsidies (T&S/GDP) are missing for China. Public sector employment ratio (PSEmpRatio) is missing for Israel. The mean FDI flows are similar, while their median is significantly different from the mean. The standard deviations of FDI flows are large. For example, the standard deviation of FDI outflows is almost the twice of its mean value. It suggests that each country's FDI flows vary over its characteristics. FDI inward performance also varies over each country's characteristics. The mean FDI inward performance is close to the standard deviation, while median value is relatively close to the mean. Overall, FDI flows and inward performance significantly depend on each country's characteristics.

The political stability also varies over the country's characteristics. The mean value ranges from 6.03 to 7.94. The mean value of *corrupt* is close to that of *democratic*, while the standard deviation is higher for *democratic*. Also, the difference between mean and median for *democratic* is the highest among the political stability variables. *Democratic* shows the highest standard deviation, while *political* shows the lowest standard deviation. From the minimum and maximum values of political stability variables, we can see that political stability varies

from country to country. For the variables of the size of public sector category, *GC/GDP* and *T&S/GDP* have similar mean and median values. The standard deviation is a little higher for *GC/GDP* than that for *T&S GDP*. The highest government consumption or transfers and subsidies as a percentage of GDP is around five or twenty seven times greater than the lowest government consumption or transfers and subsides as a percentage of GDP, respectively. The mean value of the average ratio of public sector employment in general government as a percentage of total population is 5.71. So, on average, the 5.71 percent of total population is hired in public sector. The mean and median value is close with each other, but the standard deviation is high relative to the mean value. The maximum value is around seventeen times higher than the minimum value. Overall, the size of public sector varies from country to country.

The last section of Table 2 shows the summary statistics for control variables. The mean of *ExRate* is much higher than the median, and it is because some countries, such as Brazil, have extremely high *ExRate* value in certain years. *GDP* variable also shows a significant difference between the mean value and the median value. The mean and median of all other control variables are close with one another. The standard deviation of *CAC* is high relative to its mean value. Again, the variation of control variables is significant across countries. (Note 6)

4.2 Pearson Correlation

Insert Table 3 about here

The Pearson correlations among independent variables are presented in Table 3. All the independent variables have the possible correlation with dependent variables judging from related literature. Overall, independent variables are correlated with one another within a conventional five percent significance level, except for some pairs. For example, *ExRate* is not correlated with *political* with statistical significance. Neither is *CorpTax* and *corrupt*, and *CorpTax* and *CAC*, respectively. *Exrate*, *T&S/GDP*, *PSEmpRatio* and *GDP* also show no statistical significances in their correlations. *GDP* shows negative correlations with political stability variables. Interestingly, it suggests that high GDP countries have less corruption, while their political rights and the level of democracy are low. Also, *ExRate* shows negative correlations with *corrupt* and *democratic*, indicating high real exchange rate countries have less corruption, but their democratic level is low. *CorpTax* shows positive correlations with *political* and *democratic*. So, countries with high maximum marginal corporate tax rate show high political rights and level of democracy. Finally, *CAC* shows negative correlations with *corrupt*, *political* and *democratic*, indicating that countries with high capital account closedness have low level of corruption, while low political rights and democracy level. The result is also interesting, because countries which are not open to capital flows do not necessarily have corrupted government.

4.3 The Results of Pooled OLS Estimation with Robust Standard Errors

Insert Table 4 about here

The determinants of FDI flows and inward performance through regressions are presented in Table 4 using pooled OLS estimation with robust standard errors. The sample period is from 1990 till 2002 spanning 28 countries. Total of 292 country year observations are used for the estimation, because the democratic index is missing for Hong Kong. Some countries have missing real exchange rate data, so the exchange rate series for these countries are indexed with the dollar exchange rate in the year that is observed first. After controlling for macroeconomic variables, FDI outflows have a positive relationship with political rights index, while negative relationship with democratic index. FDI inflows have a positive relationship with corruption index, while negative relationship with democratic index. So is the relationship among FDI inward performance, corruption index and democratic index. The results are consistent with our hypotheses. Countries with relatively corrupted government and low level of democracy have more FDI inflows. Also, these countries have higher FDI inward performance. Assuming relatively corrupted government and low level of democracy mean political instability, our results support the view of Lucas (1990). The relationship of FDI outflows, political rights index and democratic index is mixed. It is partly support the view of Lucas (1990) in that politically stable countries produce capital flows. However, considering countries with high political rights have higher level of democracy, the negative relationship between FDI outflows and democratic index is hard to explain. Hosting country's GDP is positively correlated with FDI flows, while negatively correlated with FDI inward performance. So, in general, high GDP countries attract or produce more capital flows, but the performance of capital inflows is low. Considering politically unstable countries are normally low GDP countries, except for a few countries, the result also supports the argument of Lucas (1990). Capital account closedness is negatively correlated with FDI flows, which is a natural consequence. If countries have a tendency not to open their capital account to foreign countries, it is hard both for hosting country and for foreign countries to produce or attract capital flows.

4.4 Feasible GLS Estimation Results

Insert Table 5 about here

The feasible GLS estimation results are presented in Table 5 using the same sample in Table 4. The results are similar to the ones in Table 4, except for a few changes. For the feasible GLS estimation, the relationship between FDI outflows and the corruption index is statistically significant with a positive sign. Countries with high corruption of government have more FDI outflows. As we explained in Table 4, considering countries with high political rights have the low level of corruption of government, the positive relationship between FDI outflows and corruption index is hard to explain. Also, the relationship between FDI inward performance and political rights index becomes negatively significant. This result is consistent with our hypothesis 2 that FDI inward performance is high for politically unstable countries, if countries with high political rights are politically stable. Capital account closedness becomes negatively correlated with FDI inward performance with statistical significance. Countries which have a tendency not to open their capital account to foreign countries have poor FDI inward performance, even though they accept some capital inflows. Log of maximum marginal corporate tax rate becomes negatively correlated with FDI flows, showing that high corporate tax rate hinders firms from doing business either in their own country or outside their own country.

4.5 Random Effects Estimation Results

Insert Table 6 about here

The random effects estimation results are provided in Table 6 using the same sample in Table 4. The results are consistent with the ones in Table 4 or Table 5, except for a few changes. For the relationship among FDI outflows and political stability variables, only the one between FDI outflows and political rights are statistically significant with a positive sign. The result is consistent with the argument of Lucas (1990) and hypothesis 1. The relationship among FDI inflows and political stability variables or the one among FDI inward performance and political stability variables are the same as in <Table 4.>. The results are consistent with the argument of Lucas (1990) and hypotheses 1 and 2. The relationships among dependent variables and control variables are the same as the ones in Table 4, except for the one between log of maximum marginal corporate tax and FDI inflows. It is statistically significant with a negative sign, suggesting that countries with high corporate tax rate do not attract capital inflows from foreign firms. The relationship is consistent with the result in Table 5 and related literature. (Note 7)

4.6 Robustness Check

4.6.1 Factor Analysis

Insert Table 7 about here

Some people may argue that the selection of political stability variables is too arbitrary. So, we performed a factor analysis by creating a VARIMAX rotated factor matrix, using the maximum likelihood estimation approach. The factor is the government quality as in La Porta et al. (1999). Variables are all the government quality measures from La Porta et al. (1999). As you can see from Table 7, we selected five key variables based on those with the highest loadings on the factor. We selected variables with higher than sixty percent loadings on the factor. *Corrupt* and *political* shows the factor loading of 0.77 and 0.87, respectively. However, *democratic* shows only the factor loading of 0.17. It seems that *political* is more important than *democratic* even though they come from the same classification based on La Porta et al. (1999). There are three more variables that are important within the government quality factor. They are *GC/GDP*, *T&S/GDP* and *PSEmpRatio*. *GC/GDP*, *T&S/GDP* and *PSEmpRatio* has the factor loadings of 0.75, 0.96 and 0.60, respectively. It seems that the expenditures of government related to social welfare and employment (*T&S/GDP* and *PSEmpRatio*) are important factors of government quality within the general expenditure (*GC/GDP*). The unique variance is the variance of a variable which is not explained by the common factor. For example, *political* has an unique variance of 0.24 which is not explained by the government quality factor. All the key variables have unique variances less than 0.5 except for *PSEmpRatio*. So, key variables have the dominant variances explained by the government quality factor. From the results of Table 7, we can argue that the selection of political stability variables was not arbitrary even though *democratic* became an insignificant variable within the factor.

4.6.2 The Verification of Empirical Results

In this section, we perform the same empirical investigation as in Table 4, Table 5 and Table 6 to verify that political stability variables still significantly affect the FDI flows and inward performance. We run the following regression equations for the verification.

$$
\begin{aligned}
\text{FDI}_{\text{outflows},i,t} (X10^{-3}) = {} & \beta_1 * corrupt_{i,t} + \beta_2 * political_{i,t} + \beta_3 * CG/GDP_{i,t} + \beta_4 * T\&S/GDP_{i,t} \\
& + \beta_5 * PSEmpRatio_{i,t} + \beta_6 * \log(GDP)_{i,t} + \beta_7 * \log(ExRate)_{i,t} \\
& + \beta_8 * \log(CorpTax) + \beta_9 * CAC_{i,t} + c_i + u_{i,t}
\end{aligned}
\tag{4}
$$

$$\text{FDI}_{\text{inflows},i,t}(X10^{-3}) = \beta_1 * corrupt_{i,t} + \beta_2 * political_{i,t} + \beta_3 * CG/GDP_{i,t} + \beta_4 * T\&S/GDP_{i,t}$$
$$+ \beta_5 * PSEmpRatio_{i,t} + \beta_6 * \log(GDP)_{i,t} + \beta_7 * \log(ExRate)_{i,t}$$
$$+ \beta_8 * \log(CorpTax) + \beta_9 * CAC_{i,t} + c_i + u_{i,t} \tag{5}$$

$$\text{FDI}_{\text{performance},i,t} = \beta_1 * corrupt_{i,t} + \beta_2 * political_{i,t} + \beta_3 * CG/GDP_{i,t} + \beta_4 * T\&S/GDP_{i,t}$$
$$+ \beta_5 * PSEmpRatio_{i,t} + \beta_6 * \log(GDP)_{i,t} + \beta_7 * \log(ExRate)_{i,t}$$
$$+ \beta_8 * \log(CorpTax) + \beta_9 * CAC_{i,t} + c_i + u_{i,t} \tag{6}$$

where i=1, …, 28, t=1990, …, 2002 and the composite error is v_i=c_i+$u_{i,t}$ with $u_{i,t}$ ~ iid. c_i is a unit specific error component. $u_{i,t}$ is the idiosyncratic error component. $\text{FDI}_{\text{outflows},i,t}(X10^{-3})$, $\text{FDI}_{\text{inflows},i,t}(X10^{-3})$ and $\text{FDI}_{\text{performance},i,t}$ is the foreign direct investment outflows divided by 1000, the foreign direct investment inflows divided by 1000 and the foreign direct investment inward performance (three year average) for the country i in the year t, respectively. (Note 8) $corrupt_{i,t}, poiltical_{i,t}, GC/GNP_{i,t}, T\&S/GNP_{i,t}$ and $PSEmpRatio_{i,t}$ is the corruption index, political rights index, government consumption per GDP, government transfers and subsidies per GNP and the ratio of public sector employment in general government to total population from La Porta et al. (1999) for the country i in the year t, respectively. $\log(GDP)_{i,t}$, $\log(ExRate)_{i,t}$, $\log(CorpTax)_{i,t}$ and CAC $_{i,t}$ is the natural log of three year average GDP, the natural log of real exchange rate, the natural log of the marginal corporate tax rates and the capital account closedness measure as in Brune et al. (2001) for the country i in the year t, respectively.

Insert Table 8 about here

As you can see from Table 8, corrupt and political consistently affect the FDI inflows and inward performance for pooled OLS and feasible GLS estimation. Corrupt has a positive relationship with the FDI inflows and inward performance, while political has a negative relationship with the FDI inflows and inward performance for pooled OLS and feasible GLS estimation. Countries with high corruption of government and low political rights have the high FDI inflows. The results are consistent with the argument of Lucas (1990) and our hypothesis 1. Consistent with our hypothesis 2, they have the high FDI inward performance. For the random effects estimation, corrupt is positively correlated with the FDI inward performance, while political is negatively correlated with the FDI inward performance. The results are consistent with our hypothesis 2.

For the control variables, only log(GDP) has consistently positive relationship with the FDI flows, while it is negatively correlated with the FDI inward performance. High GDP countries have more FDI flows, while its FDI inward performance is low. Consistent with the argument of Lucas (1990), the FDI outflows in high GDP countries are high, assuming high GDP countries are politically stable, in general. However, those countries also have the high FDI inflows and low FDI inward performance. It seems that, in general, high GDP countries are politically stable and the FDI inflows should come from the low GDP countries with political instability. If Lucas (1990)'s argument is correct, the FDI inflows from countries with political instability is limited. Since this kind of FDI inflows are limited by countries with political stability, it seems that the FDI inward performance of this kind should be poor due to the limitation by the government of hosting countries. Also, the FDI inflows are high for the high GDP countries, not consistent with our hypothesis 1, assuming high GDP countries are politically stable. In general, high GDP countries have more foreign trades than low GDP countries, so the absolute volume of FDI flows should be higher for high GDP countries.

5. Conclusion

The determinants of FDI flows are well documented in the related literature. By using the three different techniques of panel data, we investigate the relationship between the FDI and the political stability in detail by looking at FDI flows, inward performance and the specifically categorized political stability variables as in La Porta et al. (1999).

The main empirical results can be summarized as follow. First, hosting countries with higher political rights as in La Porta et al. (1999) have higher FDI outflows after controlling for macroeconomic variables. The result is consistent with Lucas (1990) and our hypothesis 1 in that politically stable countries produce capital flows to invest in politically unstable countries. Second, hosting countries with higher level of corruption of governments and lower level of democracy attract more FDI inflows after controlling for macroeconomic variables. The result is also consistent with the argument of Lucas (1990) and our hypothesis 1 that politically unstable countries attract capital flows from developed countries with high political stability. Third, consistent with our hypothesis 2, FDI inward performance is positively correlated with the corruption level of governments and negatively correlated with the level of democracy. Fourth, when the key variables of the factor analysis from La Porta et al.

(1999) are included, countries with high corruption level of governments and lower political rights have higher FDI inward performance.

The contribution of this paper is as follow. First, we support the related literature of Lucas (1990) that FDI flows are affected by the level of political stability of hosting countries, using the detailed political stability measures of governments, which is the approach that is not taken before. Second, our results contribute to the related literature by further looking at the relationship between FDI inward performance and the level of political stability of hosting countries with the combination of arguments of Lucas (1990) and La Porta et al. (1999). Finally, our empirical results are strengthened by taking three relevant econometric techniques of panel data: pooled OLS estimation with robust standard errors, cross-sectional time-series feasible GLS estimation and random effects estimation.

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Notes

Note 1. We select those three indices because they are directly related to the political stability of the country. We believe that other indices from La Porta et al. (1999) are indirectly related to the political stability.

Note 2. For example, we can think of China's business environment and its political stability. After the country's government opened their economy to foreign countries, its economy has been expanding dramatically.

Note 3. The foreign direct investment outflows and inflows are divided by 1000 for the scale adjustment purposes.

Note 4. For example, if the three year is from 1989 to 1991, then we match the latest year (1991) to the year 1991 data of controlling variables. From the controlling variables, we use three year average GDP. For this three year average GDP, we matched the latest year as the way we did for dependent variables.

Note 5. Some countries have missing data, so the exchange rate series for these countries are indexed with the dollar exchange rate in the year that is observed first.

Note 6. Extreme values are controlled by taking natural logs, but are not discarded because they are the characteristics of countries.

Note 7. For example, Hymer (1960) introduces the role of corporate tax rate in FDI flows. Also, Agmon and Lessard (1977) investigates the relationship between barriers to capital flows and different taxation in international operation.

Note 8. The foreign direct investment outflows and inflows are divided by 1000 for the scale adjustment purposes

Table 1. Variable Description

Variables	Description
Dependant Variables:	
$FDI_{inflows}$	three year average foreign direct investment inflows in millions of dollars for each country and year from World Investment Report Annex Tables, the United Nations Conference on Trade and Development
$FDI_{outflows}$	three year average foreign direct investment outflows in millions of dollars for each country and year from World Investment Report Annex Tables, the United Nations Conference on Trade and Development
$FDI_{performance}$	three year average inward foreign direct investment performance index for each country and year from World Investment Report
Explanatory Variables:	
Political Stability Efficiency:	
corrupt	Corruption in government index as in La Porta et al. (1999). Low ratings indicate "high government officials are likely to demand special payments" and "illegal payments are generally expected thought lower levels of government" in the form of "bribes linked with import and export licenses, exchange controls, tax assessment, policy protection, or loans." Scale from 0 to 10. Average of the months of April and October in the monthly index between 1982 and 1995. Source: *International Country Risk Guide*
Political Freedom:	
political	Index of political rights as in La Porta et al. (1999). Higher ratings indicate countries that come closer "to the ideals suggested by the checklist questions of: (1) free and fair elections; (2) those elected rule; (3) there are competitive parties or other competitive political groupings; (4) the opposition has an important role and power; and (5) the entities have self-determination or an extremely high degree of autonomy. Source: *Freedom of the World, 1996*
democratic	Average of democracy score for the period 1970-1994 as in La Porta et al. (1999). Scale from 0 to 10, with lower values indicating a less democratic environment. Source: *Polity III: Regime Type and Political Authority, 1800-1994.*
Size of Public Sector	
GC/GDP	Government consumption expenditures as a percentage of GDP (scale from 0 to 100). Average for the years 1975-1995. Government consumption expenditures "include all spending on goods and services purchased by the government-things like national defense, road maintenance, wages and salaries, office space, and government-owned vehicles. Since it is obtained from the national income accounts, it includes all levels of government spending. It does not include direct transfers and subsidies, since these do not enter into the national income accounts. Source: *Economic Freedom of the World, 1975-1995 (with data from the World Bank and International Monetary Fund).*
T&S/GDP	Total government transfers and subsidies as a percentage of GDP (scale from 0 to 100). Average for the years 1975-1995. Source: *Economic Freedom of the World,1975-1995(with data from the World Bank and International Monetary Fund).*
PSEmpRatio	Average of the ratio of public sector employment in general government to total population for the years 1976-1996 (%). General government employment includes employment in "all government department offices, organizations and other bodies which are agencies or instruments of the central or local authorities whether accounted for or financed in, ordinary or extraordinary budgets or extra-budgetary funds. They are not soley engaged in administration but also in defense and public order, in the promotion of economic growth and in the provision of education, health and cultural and social services." Source: *Schiavo-Campo, de Tommaso and Mukherjee, 1997.*
Control Variables:	
GDP	three year average GDP from World Investment Report Annex Tables, the United Nations Conference on Trade and Development for each country and year
ExRate	real exchange rate for each country and year calculated using nominal exchange rates and price indices from the IMF international Financial Statistics. Exchange rate series are indexed with the dollar exchange rate in 1989 set to 1 in each country
CorpTax	maximum marginal corporate tax rates in each country and year from the World Tax Database, the Office of Tax Policy Research at the University of Michigan
CAC	capital account closedness, shown in Baker, Foley and Wurgler (2006), based on Brune et al. (2001)

The definition and the way of construction of each variable are described below. The sample period is from 1990 to 2002 spanning 28 countries. Total of 305 country year observations are in the sample. Some countries have missing real exchange rate data, so the exchange rate series for these countries are indexed with the dollar exchange rate in the year that is observed first. Democratic index (*democratic*) and public sector employment ratio (*PSEmployment*) are missing for Hong Kong. Government consumption expenditures (*GC/GDP*) and total government transfers and subsidies (*T&S/GDP*) are missing for China. Public sector employment ratio (*PSEmployment*) is missing for Israel.

Table 2. Summary Statistics

Variables	N	Mean	Median	STD	Minimum	Maximum
Dependent Variables:						
$FDI_{inflows}$	305	10778.45	4347.43	16052.74	-3131.00	93688.18
$FDI_{outflows}$	305	13563.60	4223.83	24124.55	-638.51	185879.02
$FDI_{performance}$	305	1.74	1.179	1.71	-0.57	10.51
Explanatory Variables:						
Political Stability						
Efficiency:						
corrupt	305	7.94	8.51	2.04	2.14	10
Political Freedom:						
political	305	6.03	7.00	1.84	1.00	7.00
democratic	292	7.76	10.00	3.35	0.00	10.00
Size of Public Sector						
GC/GDP(%)	292	16.42	16.38	5.54	6.94	33.80
T&S/GDP(%)	292	15.36	16.22	7.52	1.07	27.40
PSEmpRatio(%)	284	5.71	4.49	3.84	0.93	17.40
Control Variables:						
GDP	305	607793.45	251081.33	906032.34	27341.30	4928502.33
ExRate	305	11832.22	1.14	75575.96	0.70	855289.60
CorpTax	305	31.76	33.30	7.69	8.50	50.00
CAC	305	4.14	3.40	2.87	1.00	9.00

The definition of each variable is the same as the one in <Table 1.>. N is the number of country-year observations. STD represents the standard deviation of each variable. The sample period is from 1990 to 2002 spanning 28 countries. Total of 305 country year observations are in the sample. Some countries have missing real exchange rate data, so the exchange rate series for these countries are indexed with the dollar exchange rate in the year that is observed first. Democratic index (*democratic*) and public sector employment ratio (*PSEmpRatio*) are missing for Hong Kong. Government consumption expenditures (*GC/GDP*) and total government transfers and subsidies (*T&S/GDP*) are missing for China. Public sector employment ratio (*PSEmpRatio*) is missing for Israel.

Table 3. Pearson Correlation Matrix

Variables	corrupt	political	democratic	CG/GDP	T&S/GDP	PSEmpRatio	GDP	ExRate	CorpTax	CAC
corrupt	1									
political	0.65 $(<.01)^{***}$	1								
democratic	0.74 $(<.01)^{***}$	0.84 $(<.01)^{***}$	1							
CG/GDP	0.52 $(<.01)^{***}$	0.58 $(<.01)^{***}$	0.54 $(<.01)^{***}$	1						
T&S/GDP	0.58 $(<.01)^{***}$	0.76 $(<.01)^{***}$	0.70 $(<.01)^{***}$	0.68 $(<.01)^{***}$	1					
PSEmpRatio	0.65 $(<.01)^{***}$	0.44 $(<.01)^{***}$	0.55 $(<.01)^{***}$	0.80 $(<.01)^{***}$	0.63 $(<.01)^{***}$	1				
GDP	-0.25 $(<.01)^{***}$	-0.41 $(<.01)^{***}$	-0.29 $(<.01)^{***}$	-0.30 $(<.01)^{***}$	-0.15 $(<.01)^{***}$	-0.34 $(<.01)^{***}$	1			
ExRate	-0.13 $(0.03)^{**}$	-0.003 (0.96)	-0.14 $(0.01)^{**}$	-0.12 $(0.04)^{**}$	-0.09 (0.14)	-0.07 (0.26)	0.04 (0.45)	1		
CorpTax	-0.02 (0.74)	0.16 $(<.01)^{***}$	0.25 $(<.01)^{***}$	0.29 $(<.01)^{***}$	0.28 $(<.01)^{***}$	-0.10 (0.10)	0.15 $(<.01)^{***}$	-0.30 $(<.01)^{***}$	1	
CAC	-0.68 $(<.01)^{***}$	-0.39 $(<.01)^{***}$	-0.67 $(<.01)^{***}$	-0.29 $(<.01)^{***}$	-0.44 $(<.01)^{***}$	-0.58 $(<.01)^{***}$	0.38 $(<.01)^{***}$	0.27 $(<.01)^{***}$	-0.04 (0.49)	1

*p.10   **p.05   *** p .01

The definition of each variable is the same as the one in <Table 1.>. The sample period is from 1990 to 2002 spanning 28 countries. Total of 305 country year observations are in the sample. Some countries have missing real exchange rate data, so the exchange rate series for these countries are indexed with the dollar exchange rate in the year that is observed first. Democratic index (*democratic*) and public sector employment ratio (*PSEmpRatio*) are missing for Hong Kong. Government consumption expenditures (*GC/GDP*) and total government transfers and subsidies (*T&S/GDP*) are missing for China. Public sector employment ratio (*PSEmpRatio*) is missing for Israel. T-statistic is in the parenthesis below each correlation value.

Table 4. Pooled OLS Estimation with Robust Standard Errors

Independent Variables	corrupt	political	democratic	Log (GDP)	Log(ExRate)	Log (CorpTax)	CAC	R^2	Number of observations
Dependent Variables:									
FDI$_{outflows}$(x10^{-3})	2.44 (1.12)	6.21 $(2.68)^{**}$	-2.91 $(-2.35)^{**}$	11.65 $(4.16)^{***}$	-1.46 $(-3.36)^{***}$	-2.95 (-0.65)	-2.74 $(-2.06)^{**}$	0.45	292
FDI$_{inflows}$(x10^{-3})	3.78 $(6.23)^{***}$	0.80 (0.71)	-2.18 $(-3.07)^{***}$	6.57 $(3.46)^{***}$	0.18 (0.44)	-0.11 (-0.03)	-1.17 $(-1.92)^{**}$	0.47	292
FDI$_{performance}$	0.43 $(3.94)^{***}$	-0.15 (-0.80)	-0.28 $(-2.18)^{**}$	-0.35 $(-2.99)^{***}$	-0.07 $(-1.71)^{*}$	-0.37 (-0.74)	-0.08 (-0.86)	0.39	292

*p.10   **p.05   *** p .01

The definition of each variable is the same as the one in Table 1. The sample period is from 1990 to 2002 spanning 28 countries. Total of 292 country year observations are used for the estimation, because the democratic index is missing for Hong Kong.. Some countries have missing real exchange rate data, so the exchange rate series for these countries are indexed with the dollar exchange rate in the year that is observed first. Z-statistics are in the parentheses.

Table 5. Cross-sectional Time-series Feasible GLS Estimation

Independent Variables	corrupt	political	democratic	Log (GDP)	Log (ExRate)	Log (CorpTax)	CAC	LR test statistic	Number of observations
Dependent Variables:									
FDI$_{outflows}$(x10^{-3})	2.45	6.35	-2.85	12.18	-1.65	-9.56	-2.76	-1277.17	292
	(2.65)***	(4.83)***	(-3.41)***	(11.75)***	(-2.86)***	(-2.03)**	(-4.30)***		
FDI$_{inflows}$(x10^{-3})	3.78	0.94	-2.09	7.16	-0.03	-7.74	-1.18	-1168.65	292
	(5.91)***	(1.04)	(-3.63)***	(10.02)***	(-0.08)	(-2.39)**	(-2.66)***		
FDI$_{performance}$	0.43	-0.15	-0.27	-0.35	-0.06	-0.36	-0.08	-477.04	292
	(7.20)***	(-1.77)*	(-5.08)***	(-5.21)***	(-1.71)*	(-1.19)	(-1.83)*		

*p.10   **p.05   *** p .01

The definition of each variable is the same as the one in Table 1. The sample period is from 1990 to 2002 spanning 28 countries. Total of 292 country year observations are used for the estimation, because the democratic index is missing for Hong Kong.. Some countries have missing real exchange rate data, so the exchange rate series for these countries are indexed with the dollar exchange rate in the year that is observed first. Z-statistics are in the parentheses. LR test statistic is the statistic for the likelihood ratio test.

Table 6. Random Effects Estimation

Independent Variables	corrupt	political	democratic	Log (GDP)	Log (ExRate)	Log (CorpTax)	CAC	R^2	Number of observations
Dependent Variables:									
FDIoutflows(x10^{-3})	3.47	7.49	-3.88	16.08	-0.61	-3.15	-3.89	0.37	292
	(1.15)	(1.82)*	(-1.50)	(5.37)***	(-0.60)	(-0.64)	(-1.89)*		
FDIinflows(x10^{-3})	3.97	1.93	-2.44	10.95	0.48	-13.04	-1.93	0.32	292
	(2.27)**	(0.81)	(-1.63)*	(6.08)***	(0.67)	(-3.57)***	(-1.62)*		
FDIperformance	0.46	-0.18	-0.29	-0.37	-0.04	-0.19	-0.10	0.37	292
	(3.19)***	(-0.94)	(-2.36)**	(-2.46)**	(-0.60)	(-0.56)	(-1.05)		

*p.10   **p.05   *** p .01

The definition of each variable is the same as the one in Table 1. The sample period is from 1990 to 2002 spanning 28 countries. Total of 292 country year observations are used for the estimation, because the democratic index is missing for Hong Kong. Some countries have missing real exchange rate data, so the exchange rate series for these countries are indexed with the dollar exchange rate in the year that is observed first. Z-statistics are in the parentheses.

Table 7. VARIMAX Rotated Factor Matrix by Maximum Likelihood Estimation

Variables	Factor 1: Government Quality	Unique Variance
corrupt	0.77	0.41
Illiteracy Rate	-0.46	0.78
political	0.87	0.24
democratic	0.17	0.97
GC/GDP	0.75	0.44
T&S/GDP	0.96	0.08
Top Tax Rate	0.33	0.89
PSEmpRatio	0.60	0.64

Factor matrix is constructed to identify key variables for the government quality factor using the maximum likelihood estimation. Key variables are highlighted in the column of 'Factor 1: Government Quality'. The values for each variable with the column of 'Factor 1: Government Quality' represent weights within the factor. *Corrupt*, *political*, *democratic*, *GC/GDP*, *T&S/GDP* and *PSEmpRatio* have the same definition as the ones in <Table 1>. The definition of the other variables is the same as the ones in La Porta et al. (1998). *Illiteracy Rate* is the average of adult illiteracy rate for the years 1990-1995. *Top Tax Rate* is the top marginal tax rate for each country in 1994. 'Unique Variance' is the proportion of the common variance of the variable not associated with the factor.

Table 8. The Robustness Check with Key Variables: Pooled OLS, Feasible GLS and Random Effects Estimation

Dependent Variables	$FDI_{outflows}$ (x10^{-3})	$FDI_{inflows}$ (x10^{-3})	$FDI_{performance}$	$FDI_{outflows}$ (x10^{-3})	$FDI_{inflows}$ (x10^{-3})	$FDI_{performance}$	$FDI_{outflows}$ (x10^{-3})	$FDI_{inflows}$ (x10^{-3})	$FDI_{performance}$
Independent Variables:	*Column A:*	*Pooled OLS*		*Column B:*	*Feasible GLS*		*Column C:*	*Random Effects*	
corrupt	5.54	3.25	0.58	5.50	3.19	0.58	6.54	3.51	0.63
	(2.13)**	(2.75)**	(3.56)***	(4.00)***	(3.53)***	(6.77)***	(1.47)	(1.43)	(2.71)***
political	-3.80	-3.83	-0.77	-3.62	-3.66	-0.76	-3.49	-3.70	-0.81
	(-1.12)	(-2.51)**	(-3.63)***	(-2.02)**	(-3.10)***	(-6.85)***	(-0.63)	(-1.20)	(-2.80)***
CG/GDP	1.40	1.82	-0.01	1.59	2.02	-0.01	1.70	2.33	0.01
	(1.09)	(2.53)**	(-0.26)	(2.92)***	(5.66)***	(-0.31)	(0.94)	(2.35)**	(0.12)
T&S/GDP	0.64	0.51	0.08	0.52	0.39	0.08	0.07	0.16	0.06
	(0.70)	(1.20)	(2.26)**	(1.53)	(1.75)*	(3.84)***	(0.07)	(0.27)	(1.08)
PSEmpRatio	-1.25	-1.58	-0.12	-1.17	-1.51	-0.12	-0.86	-1.38	-0.11
	(-1.31)	(-2.92)***	(-1.61)	(-2.01)**	(-3.94)***	(-3.27)***	(-0.45)	(-1.32)	(-1.08)
Log (GDP)	12.77	5.98	-0.50	13.59	6.85	-0.49	17.90	9.60	-0.44
	(3.96)***	(3.59)***	(-3.53)***	(11.82)***	(9.05)***	(-6.82)***	(5.24)***	(4.90)***	(-2.40)**
Log (ExRate)	-1.96	0.21	-0.05	-2.19	-0.04	-0.06	-0.76	0.47	-0.03
	(-3.44)***	(0.65)	(-1.15)	(-3.62)***	(-0.10)	(-1.53)	(-0.72)	(0.64)	(-0.51)
Log (CorpTax)	-11.44	-8.63	-0.53	-18.31	-16.15	-0.69	-4.15	-14.29	-0.16
	(-1.61)	(-1.54)	(-0.86)	(-3.75)***	(-5.03)***	(-2.29)**	(-0.81)	(-3.87)***	(-0.48)
CAC	0.59	0.27	0.11	0.55	0.22	0.11	-0.19	0.002	0.12
	(0.32)	(0.35)	(1.10)	(0.64)	(0.39)	(2.09)**	(-0.07)	(0.00)	(0.85)
R^2 or LR test statistic	0.47	0.49	0.41	-1188.19	-1074.98	-434.04	0.37	0.33	0.39
Number of Observations	271	271	271	271	271	271	271	271	271

*p.10   **p.05   *** p .01

The robustness check with key variables from Table 7 is performed in Table 8. The definition of each variable is the same as the one in Table 1. The sample period is from 1990 to 2002 spanning 25 countries. Total of 271 country year observations are used for the estimation. Some countries have missing real exchange rate data, so the exchange rate series for these countries are indexed with the dollar exchange rate in the year that is observed first. Democratic index (*democratic*) and public sector employment ratio (*PSEmpRatio*) are missing for Hong Kong. Government consumption expenditures (*GC/GDP*) and total government transfers and subsidies (*T&S/GDP*) are missing for China. Public sector employment ratio (*PSEmpRatio*) is missing for Israel. Z-statistics are in the parentheses. Likelihood Ratio test statistics are presented, instead of R^2, for the feasible GLS estimation in column B.